LEPIDOPTERA HETEROCERA

FAM. GEOMETRIDÆ

SUBFAM. HEMITHEINÆ

by Louis B. PROUT

WITH 5 COLOURED PLATES

Hemitheidæ. Bruand, Mém. Soc. Emul. Doubs, Vol. 2 (2), p. 68 (1846).
Terpnæ. Hübner, Verz. bek. Schmett. p. 285 (1826 ?) 1).
Geometridi. Guenée, Duponchel's Cat. Méth. Lép. Eur. p. 223 (1845) (nec *Geometrida*, sect. typ., Leach, Edinb. Encycl. Vol. 9 (1), p. 134).
Timandridi (part.). Stephens, List Brit. Anim. Brit. Mus. Vol. 5, p. 225 (1850).
Geometridæ. Guenée, Spec. Gén. Lép. Vol. 9, p. 332 (1858).
Hazidæ. Guenée, ibidem, Vol. 10, p. 188 (1858).
Geometrinæ. Packard, Mon. Geom. U. S. A. p. 366 (1876).
Euschemidæ. Butler, Ill. Het. Coll. Brit. Mus. Vol. 6, p. 48 (1886).
Nemoriinæ. Gumppenberg, Nova Acta Acad. Leop. d. Naturf., Halle, Vol. 49, p. 309 (1887).
Nemorinæ. Gumppenberg, ibidem, p. 340 (1887); Vol. 64, p. 455 (1895).
Geometridæ (part.). Meyrick, Proc. Linn. Soc. N. S. Wales (2), Vol. 2, p. 835 (1888).
Pseudoterpninæ. Warren, Proc. Zool. Soc. Lond. p. 349 (1893).
Dysphaniinæ. Warren, Novit. Zool. Vol. 5, p. 10 (1898).
Hemitheinæ. Prout, Wytsman's Gen. Ins. Fasc. 103, p. 10 (1910).

This subfamily has been very generally known by the name of *Geometrinae*, which, as we have shown in our Introduction, is untenable for it. Duponchel's « Chlorochromites », published as a substitute for Guenée's *Geometridi*, was not latinized; moreover the generic name *Chlorochroma*, on

1) Founded on an invalid Tentamen name. See our Introduction (*Genera Insectorum*, Fasc. 103), p. 2, 3.

which it was founded, is an absolute synonym of *Hemithea*. *Hemitheinae*, ex Bruand (1846), is therefore certainly its correct appellation.

The subfamily is evidently on the whole a very natural one, although we have allowed it to include a few doubtful forms (*Protophyta*, Turner, *Cacochloris*, Prout, etc.), its least specialized (*Protophyta*, in any case) being almost as susceptible of being placed among the heterogeneous *Œnochrominae*. In working out the classification we have been incalculably assisted by the work of Dr. A. Jefferis Turner, with whom we were in constant correspondence during the progress of his revision of the Australian genera, since published in the *Proceedings of the Linnean Society of New South Wales*, Vol. 35, pp. 555-653 (1910). Previous classifications had been based chiefly on the antenna, tibial armature, dorsal crests and venation, all of which furnish useful characters, but none, so far as can be ascertained, a consistent scheme. The gradual, progressive obsolescence of the frenulum, though of course it had not been entirely overlooked, had not been systematically consulted; but it is this which forms the foundation of Dr Turner's revision. The Australian fauna, comprising all the most archaic forms and at the same time some of the most highly specialized (e. g. *Cenochlora*, Warren), furnishes excellent material for obtaining an insight into the general lines of evolution, and we have made use of the basis with which Turner has furnished us. At the same time, its application is not without difficulties. The fact that the organ differs in the sexes, and that its atrophy is not always concurrent in both, would probably bring its employment into disfavour with extremists who admit no sexual character as even generic. But still more, the fact that it results in (roughly) *horizontal* sections from the genealogical tree places it somewhat out of harmony with the ideal principle of natural classification (which would take *vertical* sections, or, rather, would seek to cut off separate branches for « tribes ») and often necessitates our placing rather widely apart genera which are pretty clearly in an almost direct line of descent, such as the interesting group of genera with characteristic palpal and genitalic structure and kindred larval specializations typified by *Comibaena*, Hübner (with frenulum present) and *Euchloris*, Hübner (frenulum absent). Dr. Turner, with his usual acumen, has fully recognized these limitations of the system, and has in part compensated for the second by supplying a carefully thought-out genealogy of the Australian genera. This would be much complicated by the inclusion of the entire world's fauna, with its multiple ramifications and interlacings and its many imperfectly known genera (especially African); and we have necessarily been content with the broadest general outlines, supplemented by occasional comments on obvious or pretty apparent relationships under the individual genera.

Apart from the frenulum, the principal lines of specialization have been the loss of tongue, loss of metathoracic und abdominal crests, loss of median spurs of hindtibia, pectination of the ♀ antenna, shortening of the cells, with increased tendency to stalkings in the venation. The palpi are also very interesting and important, but specialize in divergent directions, and will probably require an exhaustive microscopical study before their taxonomic significance is fully understood; in the African fauna, in particular, apparently near allies frequently show extreme differences in palpal length. None, however, of these characters has shown nearly such regular progress as the frenulum; and unfortunately the few which proceed uniformly in the two sexes (cresting, venation, etc.,) seem among the least adapted to a stable classification. Even excluding *Protophyta*, which must have escaped developing them, the crests begin to disappear in some obviously rather primitive forms, such as *Epipristis*, Meyrick, yet are retained in some genera which show in other respects rather high specialization (e. g. *Lasiochlora*, Warren, *Lophochorista*, Warren, etc.), perhaps even in one where the frenulum has disappeared (see *Lophostola*, Prout). The venation is extremely inconstant in details, although its general course of evolution is as here indicated. SC^2 of the forewing only arises from the cell in a few very primitive genera, while the stalking of SC^1 is indicative of at least a moderate degree of specialization; with the exception of *Ornithospila* (which we regard as high up in its group) it occurs in no genus with the ♀ frenulum

developed; and even in those with ♂ frenulum persisting it scarcely ever appears except in conjunction with the migration of SC^2 to beyond SC^5 (the only exception being *Comibaena*, in which both SC^1 and SC^2 are in a state of flux); unfortunately, on the other hand, the exact position of SC^1 is variable even in many quite specialized genera, sometimes in close allies, occasionally in individuals of a single species. Similar remarks apply to the other stalkings, and although a survey of a large amount of material has shown them often to supply reliable generic characters, their use requires great caution and could not furnish higher groupings. The migration of SC^2 of forewing to beyond SC^5 is fixed in the *Rhomborista*-group, the *Hydata*-group and some others, and therefore very useful; but it is unreliable in a few genera. So, also, with certain peculiar conformations of the discocellulars, to be noticed in their places. Vein C of hindwing, on which Hulst bases his generic synopsis (*Trans. Amer. Ent. Soc.* Vol. 23, p. 312) follows, apparently rather unmethodically, yet not without yielding occasional useful clues, almost every course which is to be found anywhere among the *Geometridae;* its strong anastomosis with the cell (*à la* Larentiid) is certainly as a rule generic, and we have considered it to be almost always worth using as such in the present state of our knowledge: but it is possible that it may ultimately break down over the closely allied genera *Hydata* and *Prohydata* or even over the African *Syndromodes* or *Collesis* and one or two of their allies We have only allowed latitude in the single case of *Hierochthonia*, and there only as a temporary expedient to avoid the erection of a genus on a species of which only the ♀ is yet known.

Strange sports in venation are of occasional occurrence, and their possibility must be reckoned with in using a venational « key » or in defining a new genus on a single specimen (compare Warren on *Neurotoca*, *Novit. Zool.* Vol. 4, p. 43). Generally, however, they are asymmetrical, and thus not liable to deceive. As a small contribution to teratology in venation, we here put on record the cases which have come under our notice in the course of our researches; the *Comibaena-Euchloris*-group seems rather liable to furnish them. Each record refers to a single specimen 1).

Anisozyga gavissima, Walker. Left forewing with C forked.

Chrysochloroma meeki, Warren (type specimen). Ditto.

Racheospila erina, Dognin. Right hindwing with R^2 stalked with R^1.

Comibaena pustulata, Hufnagel. Right hindwing with small connecting bar between SC^2 and R^1 not far from their origin; left hindwing with rather long oblique additional vein from cell running into C.

Comibaena delineata, Warren. Both forewings with R^2 well stalked with SC^2-R^1 (SC^1 connate with that stalk), but on left wing R^2 separates from R^1 opposite departure of SC^{2-5}, while on right wing it is stalked with R^1 to considerably beyond that separation; further, in both forewings, R^1 is furcate well before termen.

Microloxia herbaria, Hübner, var. (?) *advolata*, Eversmann. Left hindwing with cell narrowing distally, by deflexion of SC (which therefore becomes excessively remote from C); SC^2, R^1 and R^2 connate from apex of cell.

Microloxia indecretata, Walker. Left forewing with SC^5 long-stalked with R^1, quite apart from SC^{2-4}, as in the *Epiplemidae*.

Euchloris albocostaria, Bremer. Both forewings ditto.

Euchloris plusiaria, Boisduval. Left forewing with C throwing out a spur costad opposite the discocellulars; right forewing with SC^1 forked (two specimens, same time and place).

Euchloris chlorophyllaria, Hedemann. Left forewing with R^2 stalked with R^1.

Euchloris quantula, Swinhoe, ab. *glareosa*, Swinhoe. Left forewing with SC^1 arising from SC^5 instead of from SC^3.

1) See also Meyrick, *Proc. Linn. Soc. N. S. Wales* (2), Vol. 2, p. 908, on a « *Hypochroma* » *percomplaria*, Guenée, and infra, p. 38, footnote.

Aglossochloris fulminaria, Lederer. Left forewing with SC^5 long-stalked with R^1, apart from SC^{2+1}.

Aglossochloris fulminaria, Lederer. Left forewing with SC^2 short-stalked with SC^1 instead of with SC^{3+5}; right hindwing with SC^2 and R^1 connected by a short bar.

Neurotoca notata, Warren (the type). Both hindwings with R^1 throwing off a short oblique branch posteriorly.

Comostola nympha, Butler. Left hindwing with R^1 furcate.

Comostola maculata, Moore. Left hindwing with R^3 furcate.

Comostola ovifera, Warren. Right hindwing with an oblique bar from middle of DC^2 to stalk of SC^2-R^1, R^1 furcate, the posterior arm of the fork meeting R^2 (which is curved at termen); left hindwing with SC^2 furcate, R^1 making a costad curve and throwing out a curved branch posteriorly, which nearly rejoins the main vein, suggesting an elongate loop.

In connection with the question of venation may be mentioned that of wing-shape. Inasmuch as the veins at the wing-margins, whose course determines the shape, are evidently the first which must vary in response to certain environmental changes they are, as a rule, even less to be relied on than the other veins; nevertheless experience has shown that really wide differences of shape have seldom appeared in evidently close allies, and we have therefore recognized genera in several cases on this character. At the same time, the presence of a slight angulation of the termen of the hindwing at R^3 is often clearly non-significant, though it has resulted in the placing, by systematists, of a good many very obvious species of *Prasinocyma* in *Thalassodes*.

We have made much use of the tibial armature, and it is very seldom indeed that is has failed to assist generic differentiation. The genera *Uliocnemis*, *Culpinia*, *Chrysochloroma*, *Œnospila*, *Episothalma*, *Diplodesma* and *Aglossochloris* of the Old World, and *Rhodochlora*, *Tachychlora* and *Tachyphyle* of the Neotropical Region alone seem inclined to give any trouble on this score — whether through individual or generic inconstancy, or intergradation towards allied genera. But there are also certain other genera — the *Hemithea* group at least — in which the armature varies with the sex, and where it is consequently needful to know both sexes in order to assign the species to its right generic position.

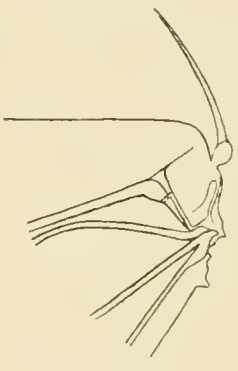
The ♂ antenna shows, as a rule, considerable stability, and there seems rarely any objection to using it as of generic value in this group, as Dr. Turner has done; sometimes not merely the presence of the pectinations, but even their approximate length has become well fixed, as for instance in the case of the usually very long pectinations of *Comibaena*, etc., or the usually quite short ones of *Nemoria* (*Aplodes*), *Racheospila*, etc. The ♀ antenna is less dependable, truly pectinate antennæ and merely dentate or almost simple sometimes occurring side by side in quite nearly related species; but it, too, has attained stability in *Dysphania*, in most of the *Oospila* group of the Neotropical Region, etc. Even the ♂ antenna cannot be used as generic in quite every case; see the following genera: *Æolochroma*, *Terpna*, *Bathycolpodes*, *Omphax*, *Mixocera*.

General characters of the Subfamily. — Face almost always smooth or nearly so, rarely protuberant, extremely exceptionally with frontal tuft. Antenna often short, usually bipectinate in the ♂ and frequently in the ♀ (see Fig. 8), never unipectinate; the pectinations rarely continued to the apex; the two series (especially when long) usually more or less strongly unequal in length. Hindtibia rarely aborted, but often with terminal spurs only; ♂ hindtibia not infrequently with elongate terminal process[1]). Abdomen frequently crested; ♂ abdomen frequently with strong pencil of hairs just behind the basal abdominal cavity (see Fig. 12, *Oospila coerulea*). Wings usually ample, never rudimentary

1) This is apparently of variable generic value, though persistent almost throughout the large genus *Comibaena*, and very general in *Racheospila*, etc. See Fig. 10.

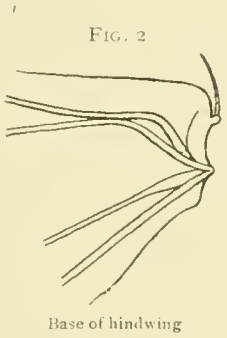
or wanting, in nearly all the specialized forms protectively assimilated to leaves, prevailing colour therefore green; termen of hindwing or of both wings frequently angled or irregular. Frenulum rarely very long or strong, but showing a strong tendency to progressive obsolescence: either (*1*) fairly well developed in ♂ (see **Fig. 1**) and consisting in ♀ of a moderate bunch of hairs (**Pl. 2, Fig. 14**) 1); or (*2*) more or less short and weak in ♂, arising from before a humeral dilation (**Fig. 2**), in ♀ wanting or vestigial; or (*3*) entirely wanting in both sexes, the humeral dilation stronger (**Fig. 3**). Both wings

Fig. 1



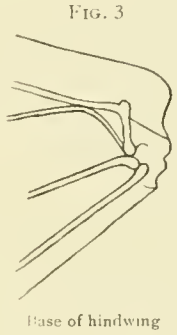
Base of hindwing of *Terpna crocina*, Butler, ♂.

Fig. 2



Base of hindwing of *Chlorissoma dichlorata*, Guenée, ♂.

Fig. 3



Base of hindwing of *Iodis lactearia*, Linné, ♂.

with all the veins present 2), cells usually less than one-half the length of wing, frequently very short, discocellulars (or at least DC^3) usually incurved, often very deeply, often very oblique posteriorly 3). Forewing with SC^1 arising near end of cell or stalked, free or anastomosing with C, or with C and SC^2, rarely 4) with SC^2 only, never anastomosing with SC^3; SC^2 scarcely ever 5) stalked with SC^1, and only arising independently from the cell in the five most primitive genera, otherwise stalked with SC^{3-5} with remarkable constancy, usually arising before, but sometimes after, SC^5; SC^{3-5} always stalked, SC^3 very rarely 6) anastomosing with SC^2; DC^1, if present, nearly always very short and oblique, very frequently wanting, R^1 being stalked, or even long-stalked, with the subcostals; R^2 usually from above middle of discocellulars. Hindwing with humeral angle strong, expanding in proportion as the frenulum becomes reduced; C more variable than in the other subfamilies, normally free, but approximated to cell near base, diverging rapidly from before, or at latest at the middle of the cell; SC^2 usually stalked with R^1 (except in the earlier genera), R^2 nearly always from above, frequently from very much above the middle of the cell 7).

The most characteristic features of the venation are the almost constant stalking of SC^2 of the forewing, the absolute absence of an areole, sens. str., i. e. such as results from anastomosis of SC^1

1) We have only found a really robust ♂ frenulum in *Chlorodontopera*.

2) Except in *Cucchloris avidula* and in the *Acrortha* section of *Diplodesma*.

3) When DC^{2-3} forms one continuous curve we have usually expressed it simply by « DC incurved »; occasionally, when the anterior part of the curve is very steep we have added an indication that the cell is thereby « produced apically ». When DC^2 is approximately vertical (or in hindwing slightly inclined to be oblique outwards) and only DC^3 incurved, we have usually only specified the latter; only when the resultant angle at the base of R^2 is exceptionally strong have we called particular attention to it. When these two discocellulars form independent inward curves, the angulation at R^2 is of course accentuated, and always worthy of attention (compare *Ornithospila*, etc.). Another equally striking phase of angulation sometimes occurs, and needs distinguishing from the last mentioned; this is where DC^2 becomes extremely oblique, so that the anterior extremity of DC^3 it considerably further from the base of the wing than that of DC^2 (See **Pl. 4, Fig. 17**); we have indicated it by stating that « DC^3 arises distally to DC^2 ».

4) See our figured specimen of *Chrysochloroma megaloptera*, **Pl. 3, Fig. 15**.

5) Only, so far as is known, in *Cucchloris ochrea* and *Helicopage* (?) *cinerea* and sometimes — by obsolescence of its base — in *Hypodexia deteriorata*. The latter is probably of little importance; we have seen a specimen of the allied *H. muscosaria* in which, by a similar basal obsolescence, SC^1 is made to arise out of C.

6) Only, so far as is known, in *Leucesthes* and sometimes *Mixochroa*, *Helicopage* (?) *cinerea*, *Omphax bucoti* and *Rhadinomphax divincta*. Warren says also in *Tolochroma* (?) *subrubella*.

7) Almost central in *Xenochlorodes* and sometimes in *Omphacodes*, ventral in *Mixophanes*.

with SC^1, or of SC^5 (out of SC^1) with SC^{1+2}), and — in the hindwing especially — the point of origin of R^2, above or much above the middle of the discocellulars.

The specializations of vein C of the hindwing, of which we have already made mention as furnishing the groundwork of Hulst's synopsis, only arise in a few of the higher groups. They are not found in our first three groups, and only begin to appear accidentally, as it were, in our fourth (*Agoschema, Agathiopsis, Victoria*, etc.), but the point-anastomosis (or point-appression) followed by rapid divergence becomes almost fixed in the *Hemithea-, Comostola-* and *Eucrostes*-sections, leading to somewhat longer anastomosis in *Thalera, Synchlora* and one or two others; while the strongest anastomosis, although it has not yet attained a higher than generic significance, is found exclusively in our two highest groups, and nearly always in conjunction with other marks of advanced specialization: palpal or antennal modifications, loss of median spurs, stalking of SC^1 of forewing, etc. With the exception of the Australian and the Malayan (with New Guinea), it appears in all the principal faunistic regions, but it is the most prevalent in the Ethiopian. It is very suggestive that it is the home of the most primitive genera which fails to provide this specialization, and that India, the home of *Archaeobalbis* and of most of our second, third and even fourth groups (of course excepting the Australian and Malayan), furnishes only a single instance of it, *Omphacodes directa*, Walker. This handful of genera cannot possibly be confounded with the *Larentiinae* if the rest of the venation be taken into account.

As regards the conventional subfamily character, the position of R^2 of the hindwing, Turner well remarks (*Proc. Linn. Soc. N. S. Wales*, Vol. 35, p. 557) that its significance does not lie in its occurrence, but in its fixity. We have already noted it in certain (*Enochrominae*); it is characteristic in a few *Acidaliinae* (*Asellodes*, Guenée, etc.), and even in the entirely unrelated *Larentiinae* R^2 is at times somewhat nearer to R^1 than to R^3. It is further interesting that the character is very marked in nearly all the lower groups in the *Hemitheinae*, and that the very few in which its position is moderated — at last even almost *central* — belong to the highly specialized forms, as *Omphacodes, Xenochlorodes* and the ambiguous *Mixocphanes*; so that the character would appear to have reached its zenith in the early days of the evolutionary history of the subfamily, and to be now somewhat on the wane, at least in certain branches [2].

The ♂ genitalia have been too little studied to allow of many generalizations, though the species which have been investigated seem to show generally a satisfactory homogeneity. The « gnathos » is, with a few curious and apparently arbitrary exceptions, present; the penis is very generally « pestillate ». We are indebted for our knowledge of these parts exclusively to the researches of Rev. C. R. N. Burrows and Mr. F. N. Pierce, who provide the following glossary of terms supplemental to those employed in Pierce's « Genitalia of the Group Noctuidæ of the Lepidoptera of the British Islands » :

Gnathos : the lower jaw of the mandibulate uncus (= « shark's jaw » of Chapman [3]).

Socii : the two organs which in some species lie alongside the uncus.

Pestillate : shaped like a pestle (used of the penis).

Corema (plural, *coremata*) : the extensile organ bearing a brush of long hairs, springing from the dorsal extremity of the eighth abdominal segment and above the junction with the tegumen.

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1) Warren (*Novit. Zool.* Vol. 2, p. 130) uses the term « double areole » in diagnosing *Mixochlora*, and it could also be applied to *Lencesthes*; in these isolated cases there is no vital difference (apart from details of position) from the structure occurring in those genera of the *Acidaliinae* which have a double areole and SC^2 stalked (e. g. *Eucestidia, Rhodostrophia*, part., etc.); but in any case they are of exceedingly exceptional occurence in the present subfamily. The origin of SC^1 much further proximally in the *Acidaliinae* is still distinctive in such cases, and in them SC^2 anastomoses, with SC^{3+4} at, or close to, the origin of SC^5, whereas in the two *Hemitheinae* it anastomoses much later.

2) Meyrick (*Proc. Linn. Soc. N. S. Wales* (2), Vol. 2, p. 805), in diagnosing [*Eucrostis*] *Iudops argocraua*, says: « 5 (= R^3) equidistant between 4 and 6 » but his single specimen must have been an aberration, in a series of seven which we have examined, we find this vein variable in position, but never actually central.

3) See *Genera Insectorum*, Fasc. 103, p. 6.

Fused : united along a considerable portion of the lower inner edge, so as to prevent the opening of the harpes without the risk or certainty of rupture.

Unless otherwise specified, the characterization given is always founded on the type species of the genus.

A few words may be added on the differentiation of the *Hemitheinae* from their nearest relatives, the *Acidaliinae*. One distinction which Turner has considered « radical » is unfortunately inconstant, though generally helpful; namely, the wide separation of SC^{3-5} at their base from R^1. We have seen instances, at least in the variable *Rhodostrophia*, where these are absolutely connate, and close approximation is not very rare. Without any reference to this, however, we have many criteria to apply. If SC^2 is from the cell and anastomoses with SC^{3-5}, or if SC^{1-2} arise coincidently from the cell and anastomose with SC^{3-5}, or even if SC^2 is stalked with SC^{3-5} provided SC^1 arises far from end of cell and the two anastomoses take place, than the species is certainly Acidaliine. If SC^1 is from the cell and fails to anastomose with SC^{3-5} it is almost certainly Hemitheine: we know of no exception but *Cleta*, Duponchel, and one or two American species of *Ptychopoda*, Stephens, both of which genera have almost all the other typical characteristics of the *Acidaliinae*, and could not perplex the systematist. If the five subcostals are stalked but arise in the order $SC^{1.2.5.3.4}$, the genus is Hemitheine; if in the order $SC^{5.1\,2\,3\,4}$ (*Pleuroprucha*, Möschler) it is Acidaliine. This only leaves room for doubt in the case of the few genera in which the order is $SC^{1.5.2.3.4}$: *Chrysocraspeda*, Hampson, *Ornithospila*, *Comibaena* (part.), *Argyrocosma*, *Diplodesma* (part.), *Lathochlora*. Of these, only the first-named belongs to the *Acidaliinae*, and this is amply attested, not only by the colour scheme, but by an ensemble of characters which would hardly be possible of combination in the *Hemitheinae :* frenulum fully developed, long (only found in generalized *Hemitheinae)*, hindwing with C anastomosing at a point with cell (only found in specialized *Hemitheinae)*, discocellulars straight, subcostal stalk arising much before end of cell, etc.

An interesting generalization has further been offered by Hulst (*Trans. Amer. Ent. Soc.* Vol. 23, p. 247), which we have only checked on a few unrelated species taken at random from the two subfamilies, and from differing faunas, but which we have thus far found valid. He observes, namely, that the *Acidaliinae* have the pectinations (when present) placed at the base of the segments, the *Hemitheinae* much further distad — he says « at the top of the segments », but this requires modifying, as they are often about the middle.

Early Stages. — These have been carefully and accurately studied in the case of some of the Palæarctic and Nearctic forms, and a basis is hereby provided for some useful generalizations. But there is still a deplorable lack of precise and detailed information concerning the other regions, including practically the entire area of distribution of our first three groups; from the very few intimations that are accessible, there is reason to suspect that they almost entirely lack the specializations which we associate with the more recent forms. An admirable series of life-histories by the Rev. C. R. N. Burrows is invaluable on the following species : *Hipparchus papilionaria*, Linné (as *Geometra*, *Ent. Record*, Vol. 17, p. 200), *Comibaena pustulata*, Hufnagel (ibidem, Vol. 15, p. 171), *Hemithea aestivaria*, Hübner (ibidem, Vol. 19, p. 234), *Chlorissa viridata*, Linné (as *Nemoria*, ibidem, Vol. 20, p. 128) and *Euchloris smaragdaria*, Fabricius (as *Phorodesma*, ibidem, Vol. 12, p. 113). Some excellent larval descriptions by Dyar will also be noticed in their places. Egg elliptical, usually somewhat flattened above and below, often slightly truncate at the broader, micropylar end; pattern consisting of the normal hexagonal reticulation; size rather large compared with that of the moth. Larva generally rigid, rugose, granulated, without conspicuous protuberances, assimilated to small twigs, often wonderfully adaptive, the colour and scheme of protection varying according to the conditions of the food-plant; head usually bifid, first thoracic segment higher than the head, more or less produced anteriorly into two points. In the *Comibaena*-group, however (and some which do not obviously belong closely to that group, such as *Synchlora*), protected

in quite a different way, being furnished with an elaborate arrangement of special spine-bearing (or hook-bearing) processes whereby they clothe themselves with debris of the food plant. Pupa more or less rugose, greenish or light-coloured, not subterranean nor enclosed in a strong cocoon, but merely spun by a few threads among leaves. See, however, *Protophyta* and *Stoictopsis*, to which will probably have to be added other archaic forms.

Geographical distribution of species. — Palæarctic and Nearctic (excepting the far north); Indo-Australian (strongly represented); Æthiopian; Neotropical. Wanting in New Zealand, Hawaii and and probably numerous Pacific Islands and in the extreme south of South America; almost wanting in Chili. Distribution doubtless in part governed by the general attachment of the species to trees and advanced types of vegetation; perhaps on account of the absence of circumpolar representation, no forms common to the Palæarctic and Nearctic Regions (a sharp contrast to the *Larentiinae*).

Subdivision of the Subfamily. — As shown in our introductory remarks, the scheme of classification does not lend itself readily to the differentiation of clearly-defined Tribes. It would not, indeed, be difficult to isolate a few of the groups as such, notably the genera *Dysphania* and *Cusuma* (*Dysphaniinae*, Warren) or the genera *Uliocnemis*, *Comibaena*, *Euchloris*, etc. (vide supra), but it seems inexpedient to depart from the general unity of plan for the sake of these few, inasmuch as the sequence of the vast residue would not in any way be assisted thereby. We merely indicate, for convenience of analysis, six groups, the last two of which are marked off by the specializations of the frenulum-development, while the first four are subdivisions of the group with frenulum complete, or nearly so, and are founded on (*a*) the point of origin of SC^2 of the forewing and (*b*) the nature of the response to environmental conditions and needs: i. e., the protective *habitus*. The last-named, which is mainly responsible for Warren's threefold division, *Dysphaniinae*, *Pseudoterpninae*, *Geometrinae*, may, or may not, prove natural. Dr. Turner thinks not, and believes *Dysphania* and one of the leaf-green genera (*Euchlora*) to be quite closely related to the *Pseudoterpninae*; but as the great majority have certainly taken independent paths we consider that a convenient, even though possibly arbitrary, working arrangement may be obtained by recognizing them. The New World genera, which nearly all fall into our fourth and fifth groups, have certainly followed the same general course of evolution as those of the Old World, but the ♀ seems to have been on the whole more conservative of the frenulum, thus offering some examples of genera (*Racheospila*, *Synchlora*, etc.,) which are awkwardly on the border-line between the two groups named. For this reason, as well as on grounds of practical convenience, we provide a separate key to the New World genera, some of which, although differing sufficiently from their Old World relatives to render their fusion undesirable, are yet much more sharply-defined when compared with the other genera of their own fauna. The only two genera which are common to both hemispheres, of which one presents some curious problems of geographical distribution (viz. *Eucrostes*), are of course inserted in both keys.

Unfortunately a few genera which seem likely to be valid are only known in the ♀ sex, or are otherwise quite imperfectly known. Where it seems reasonably safe to do so, these are introduced into the keys as accurately as circumstances will allow, though in one or two cases only by some superficial distinction such as that of coloration, which would not necessarily hold in the event of the discovery of species with similar coloration but differing structure. No key, however, can be made to cover possible future contingencies. The following are the only genera known to us which we have felt compelled to omit from the keys [1], and which must therefore be consulted separately, being here relegated to footnotes: *Chloroparda*, *Lathochlora*, *Mesurodes*, *Rhombochlora*.

[1] The entirely unknown genera *Leptographa*, Hübner, and *Xenochlaena*, Lower, are not placed in the body of our work at all, but merely referred to at the end.

KEY TO THE GENERA

A. — Old World Genera

The following preliminary key, though rather cumbrous in one or two places, is adapted to coincide as nearly as convenient with our six Groups, and so to allow of their being worked out in dichotomous tabulation subsequently. It is believed that this will in the net result be found an advantage, as the least sharply differentiated groups (Groups II and IV) can generally, with a very little experience, be quite readily separated by their facies, and the detailed keys resorted to immediately.

1. *Forewing with* SC^2 *arising separately from the cell* . . . . . GROUP I.
   Forewing with SC^2 *not arising separately from the cell* . . . . . 2.
2. *Hindwing without basal expansion* 1), *frenulum present in both sexes* . . . . . 3.
   Hindwing with marked basal expansion, ♀ *frenulum absent or absolutely vestigial* . . . . . 6.
3. *Forewing with fovea* . . . . . GROUP III.
   Forewing without fovea . . . . . 4.
4. *Hindtibia without median spurs* 2) . . . . . GROUP II (part.).
   Hindtibia with median spurs . . . . . 5.
5. *Abdomen very usually crested* 3), *build usually robust, clothing and scaling dense; hindwing without tail or salient angle at* R^3, SC^2 *scarcely ever stalked; prevailing coloration greys or moss greens, never leaf-green* . . . . . GROUP II.
   Abdomen not crested, or, if so, hindwing angled or tailed at R^3; *build seldom very robust, scaling often smooth; hindwing with* SC^2 *often stalked; prevailing coloration bright or light greens, usually assimilated to leaves* . . . . . GROUP IV.
6. ♂ *frenulum present* . . . . . GROUP V.
   ♂ *frenulum absent* . . . . . GROUP VI.

It may be added that in Groups V and VI the abdomen is rarely crested, the build usually slender, median spurs often wanting, scaling usually smooth, termen of hindwing usually smooth or with a single angle or tail, SC^1 of forewing is at times stalked, C of hindwing often anastomoses with cell at a point, sometimes strongly.

Group I

1. *Thorax and abdomen not crested.* . . . . . 1. Genus PROTOPHYTA, Turner.
   Abdomen and often thorax crested. . . . . . 2.
2. *Thorax strongly crested;* ♂ *antenna bipectinate* . . . . . 3.
   Thorax not or only slightly crested; ♂ *antenna simple* . . . . . 4.
3. *Hindwing with* SC^2 *stalked.* . . . . . 4. Genus STERICTOPSIS, Warren.
   Hindwing with SC^2 *separate* . . . . . 2. Genus HELIOMYSTIS, Meyrick.
4. *Abdominal crests very strong; hindwing with* C *closely approximated to cell to beyond one-half* . . . . . 3. Genus RHUMA, Walker.
   Abdominal crests small; hindwing with C *diverging well before one-half* . . . . . 5. Genus ARCHÆOBALBIS, nov. gen., Prout.

1) Except in *Apolasmia*, which has strong ♀ frenulum, and very slightly in *Pseudoterpna*, which has moderately long, though very meagre ♀ frenulum.

2) There are only four known Old World genera with complete frenulum and only two spurs, namely *Crypsiphona*, *Synclysmus*, *Xenochroma* and *Gnophoscma*, all of which we refer high up in Group II; but as the three last are rather anomalous, and little known, we have called special attention to them. In Group IV, so far as is known, the median spurs are invariably present.

3) Not crested in *Apolasmia*, and not or only slightly in *Herochroma*, *Actenochroma* and *Epipristis*.

Group II

1. *Hindtibia with two spurs* . . . . . 2.
   Hindtibia with four spurs . . . . . 5.
2. *Tongue well developed* . . . . . 20. Genus Crypsiphona, Meyrick.
   Tongue wanting or rudimentary . . . . . 3.
3. *Abdomen crested; SC^2 of forewing normal* . . . . . 4.
   Abdomen not crested; SC^2 of forewing stalked to beyond SC^5. 25. Genus Gnophosema, nov. gen., Prout.
4. *Head rough-scaled* . . . . . 21. Genus Synclysmus, Butler.
   Head normal . . . . . 22. Genus Xenochroma, Warren.
5. *Hindwing with slight basal expansion, ♀ frenulum sometimes weak* . . . . . 6.
   Hindwing without basal expansion, ♀ frenulum well developed . . . . . 7.
6. *Abdomen crested; ♂ antenna bipectinate.* . . . . . 23. Genus Pseudoterpna, Hübner.
   Abdomen not crested; ♂ antenna not bipectinate. . . . . 24. Genus Apodasmia, Turner.
7. *Tongue wanting* . . . . . 11. Genus Mimandria, Swinhoe.
   Tongue developed. . . . . . 8.
8. *Head with hood projecting above face* . . . . . 18. Genus Cyneoterpna, Prout.
   Head without hood . . . . . 9.
9. *Metathorax with very strongly developed crest* . . . . 17. Genus Dindica, Moore.
   Metathorax not, or at most quite moderately crested. . . . . . 10.
10. *Hindwing with tufts of raised scales* . . . . . 11.
    Hindwing without tufts of raised scales . . . . . 12.
11. *Hindwing with cell short, scale-tuft at its end* . . . . 12. Genus Pingasa, Moore.
    Hindwing with cell normal, scale-tuft before its end . . 13. Genus Hydrodoxa, nov. gen., Prout.
12. *Hindwing with C approximated to cell to at least one-half.* 19. Genus Sphagnodela, Warren.
    Hindwing with C diverging before one-half . . . . . 13.
13. *Pectus densely hairy; femora usually hairy; hindwing with C approximated to cell for some distance* 1) . . . . . 14.
    Pectus not densely hairy; femora almost glabrous; hindwing with C approximated to cell at point only near base. . 10. Genus Epipristis, Meyrick.
14. *Abdominal crests rudimentary or wanting* . . . . . 15.
    Abdominal crests developed. . . . . . 16.
15. *Hindwing normally shaped; ♂ hindtibia without process.* 8. Genus Actenochroma, Warren.
    Hindwing not normally shaped; ♂ hindtibia with terminal process. . . . . . 7. Genus Herochroma, Swinhoe.
16. *Frons nearly always strongly protuberant* 2); *femora (especially hindfemur) densely hairy* . . . . . 17.
    Frons not strongly protuberant; femora glabrous or (hindfemur) slightly or quite moderately hairy 3). . . . . 18.
17. *♂ antenna simple; forewing with SC^1 anastomosing with C and SC^2; hindwing with termen strongly crenate* . . 6. Genus Neobalbis, nov. gen., Prout.

1) But see *Orthocraspeda*
2) Less so in *Terpna pictaria* and *neonoma*
3) More so in a few *Metallophia*.

♂ *antenna nearly always bipectinate; forewing with* SC^1 *almost always free; hindwing with termen less crenate* . 16. Genus Terpna, Herrich-Schäffer.

18. *Forewing with termen almost vertical anteriorly; abdominal crests moderate;* ♀ *palpus with third joint long.* . . 9. Genus Orthocraspeda, nov. gen., Prout.

Forewing with termen strongly oblique anteriorly; abdominal crests usually strong; ♀ *palpus with third joint not long.* . . . . . 19.

19. DC *of forewing with angle (usually sharp) at origin of* R^2: ♂ *antenna dentate-ciliate or pectinate; hindwing with inner margin not elongate* . . . . . 14. Genus Æolochroma, nov. gen., Prout.

DC *of forewing not angled at* R^2; ♂ *antenna lamellate; hindwing with inner margin more or less elongate* . . 15. Genus Metallolophia, Warren.

Group III

1. *Forewing (especially in* ♂*) much elongated; fovea strong.* 26. Genus Dysphania, Hübner.

Forewing normally shaped; fovea not strong . . . . . 27. Genus Cusuma, Moore.

Group IV

1. ♂ *frenulum clubbed at extremity* . . . . . 47. Genus Dioscore, Warren.

♂ *frenulum not clubbed* . . . . . 2.

2. *Forewing with apex falcate, termen otherwise smooth* . . . . . 3.

Forewing with apex not falcate or termen not smooth 1). . . . . 5.

3. *Palpus minute* . . . . . 43. Genus Chlorozancla, nov. gen., Prout.

Palpus moderate to long . . . . . 4.

4. *Third joint of palpus small* . . . . . 41. Genus Limbatochlamys, Rothschild.

Third joint of palpus elongate . . . . . 42 Genus Tanaorhinus, Butler.

5. *Forewing with* SC^2 *arising after* SC^5 . . . . . 6.

Forewing with SC^2 *arising before* SC^5 2) . . . . . 7.

6. *Abdomen crested;* SC^1 *of forewing from cell;* DC *of hindwing rather straight* . . . . . 58. Genus Opisthotia, Warren.

Abdomen not crested; SC^1 *of forewing stalked;* DC *of hindwing acutely angled.* . . . . . 48. Genus Ornithospila, Guenée.

7. *Hindwing with* SC^2 *stalked* 3) . . . . . 8.

Hindwing with SC^2 *not stalked* . . . . . 22.

8. *Tongue wanting or vestigial* . . . . . 9.

Tongue developed . . . . . 10.

9. *Palpus short to minute* . . . . . 56. Genus Archichlora, Warren (part.).

Palpus moderate to long . . . . . 55. Genus Victoria, Warren.

10. *Metathorax crested* . . . . . 54. Genus Lophomachia, nov. gen., Prout.

Metathorax not crested . . . . . 11.

11. *Abdomen crested* . . . . . 12.

Abdomen not crested. . . . . . 13.

12. *Crests strong* . . . . . 56. Genus Archichlora, Warren (part.).

1) But see *Hipparchus smaragdus*.
2) Except *Osteosema fiscata*.
3) Sometimes connate in *Chloromachia*

Crests small	39. Genus Xenozancla, Warren.
13. *Face tufted; hindwing with subdiaphanous basal patch.* .	40 Genus Aporandria, Warren.
Face not or scarcely tufted; hindwing without subdiaphanous basal patch	14.
14. *Hindwing with marked excision between* R^1 *and* R^3 . .	36. Genus Eucxena, Warren.
Hindwing without marked excision between R^1 *and* R^3.	15.
15. *Wings black, white marked*	28. Genus Agoschema, Prout.
Wings green	16.
16. ♂ *antenna simple;* ♀ *palpus with third joint long* 1) . .	53. Genus Chloromachia, Warren.
♂ *antenna bipectinate;* ♀ *palpus usually with third joint short*	17.
17. *Palpus with third joint relatively long*	18.
Palpus with third joint short	19.
18. *Antenna rather long, in* ♀ *not bipectinate*	51. Genus Anisozyga, Prout
Antenna short, in ♀ *bipectinate*	59. Genus Osteosema, Warren (part.).
19. *Hindwing with termen bent at* R^1, *shortly toothed at* R^3 *and roundly produced at tornus,* M^1 *separate*	57. Genus Chlorodes, Guenée.
Hindwing not so shaped, M^1 *stalked*	20.
20. *Hindwing with* DC *strongly oblique*	52. Genus Eucyclodes, Warren.
Hindwing with DC *not strongly oblique*	21.
21. ♂ *hindtibia dilated, with process;* ♀ *antenna simple* . .	60. Genus Ochrognesia, Warren.
♂ *hindtibia simple;* ♀ *antenna bipectinate*	59. Genus Osteosema, Warren (part.).
22. *Palpus short*	38. Genus Aracima, Butler.
Palpus moderate to long	23.
23. *Antenna in* ♂ *simple*	24.
Antenna in ♂ *bipectinate*	26.
24. *Metathorax crested; abdominal crests highly developed* . .	32. Genus Lophochlora, Warren.
Metathorax not crested; abdominal crests small or wanting.	25.
25. *Forewing angled at* R^3	35. Genus Dooabia, Warren.
Forewing not angled at R^3.	30. Genus Agathia, Guenée.
26. *Abdomen crested*	27.
Abdomen not crested.	28.
27. *Abdominal crests strong; forewing with termen strongly elbowed*	33. Genus Camptolophia, Warren.
Abdominal crests slight; forewing with termen not elbowed.	31. Genus Paragathia, Warren.
28. *Both wings with termen strongly and irregularly dentate* .	37. Genus Chlorodontopera, Warren.
Forewing, and generally hindwing, not strongly dentate	29.
29. *Hindwing with termen toothed or angled at* R^1 *as well as* R^3; ♂ *retinaculum abnormal*	34. Genus Heliopage, Warren.
Hindwing with termen even, or with a single angle at R^3; ♂ *retinaculum normal*	30.
30. *Scaling smooth, iridescent; forewing with apex not acute.*	31.
Scaling thick, opaque; forewing with apex usually acute	32.

1) The ♀ can be distinguished from *Anisozyga*, which shares with it the long palpus, by having DC of the hindwing less oblique and lacking the very usual pectoral pencil of that genus.

31. ♂ *hindtibia with strong pencil; ♀ palpus with third joint rather long* . . . . . 46. Genus Chlororithra, Butler.
♂ hindtibia without pencil; ♀ palpus with third joint moderate 1) . . . . . 45. Genus Iotaphora, Warren.

32. *Palpus rough-haired above and beneath; forewing with* SC_1 *not anastomosing with* SC^2. . . . . 44. Genus Hipparchus, Leach.
Palpus nearly smooth; forewing with SC^1 *anastomosing with* SC^2. . . . . 29. Genus Œnochlora, Warren.

Group V

1. *Hindwing with C anastomosing with cell to at least one-half* . . . . . 2.
Hindwing with C free, or anastomosing very briefly near base only . . . . . 7.

2. *Palpus short, third joint in ♀ small.* . . . . . 3.
Palpus moderate to long, third joint in ♀ elongate. . . . 152. Genus Rhodesia, Warren.

3. *Forewing with* SC^2 *arising before or immediately after* R^1. 146. Genus Dichroma, Westwood.
Forewing with SC^2 *normal* . . . . . 4.

4. *Hindtibia with median spurs present* . . . . . 5.
Hindtibia with median spurs absent . . . . . 155. Genus Hierochthonia, nov. gen., Prout.

5. *Wings narrow; ♂ antenna simple* . . . . . 145. Genus Rhadinomphax, Prout.
Wings not narrow; ♂ antenna bipectinate . . . . . 6.

6. *Hindwing with termen evenly rounded, costa not long; ♀ antenna simple* . . . . . 154. Genus Syndromodes, Warren.
Hindwing with termen not evenly rounded, costa long; ♀ antenna bipectinate . . . . . 153. Genus Lasiochlora, Warren.

7. *Forewing with* SC^2 *arising after* SC^5 . . . . . 8.
Forewing with SC^2 *arising before* SC^5 2) . . . . . 17.

8. *Hindtibia — at least in ♂* 3) *— with terminal spurs only.* . . . . . 9.
Hindtibia in both sexes with all spurs . . . . . 11.

9. *Wings smoothly and thinly scaled; abdomen not crested; ♂ antenna ciliated* . . . . . 134. Genus Diplodesma, sect. IV, Warren.
Wings thickly scaled; abdomen crested; ♂ antenna bipectinate . . . . . 10.

10. DC *strongly angled at* R_2. . . . . 65. Genus Spaniocentra, nov. gen., Prout.
DC *not strongly angled at* R^2. . . . . 130. Genus Ctenothea, nov. gen., Prout.

11. *Antenna in ♂ ciliated; abdomen with metallic crests* . . 117. Genus Metallochlora, Warren (part.).
Antenna in ♂ bipectinate; crests wanting, or non-metallic. . . . . . 12.

12. *Palpus short* . . . . . 66. Genus Metacineta, nov. gen., Prout.
Palpus moderate to long . . . . . 13.

13. *Abdomen strongly crested* . . . . . 63. Genus Chloromianta, Warren.
Abdomen not or only slightly crested . . . . . 14.

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1) There are also venational differences between these two genera; in *Chlororithra* R^2 of the hindwing arises closer to R^1, and M^1 is connate or short-stalked, while in *Iotaphora* it is separate.

2) Except an occasional aberrant species in *Prasinocyma*.

3) The ♀♀ of *Ctenothea* and of *Diplodesma xanthochlora* are unknown to us, and we have only seen one sound ♀ of *D. subexpressa* (terminal spurs only) and one of, presumably, *subtusumbrata* (one median present). *Chloroparda* and *Lathochlora* (♂♂ unknown probably also belong here in our key.

14. *Both wings with* M^1 *remote at origin from* R^3, DC *abnormal* — 67. Genus Argyrocosma, Turner.
Both wings with M^1 *not remote at origin*, DC *normal.* . . . . . 15.

15. *Palpus with second joint long-haired beneath.* . . . . . 58. Genus Comibæna, Hübner (part.).
Palpus with second joint not long-haired beneath . . . . . 16.

16. *Hindwing with marked basal expansion,* DC^3 *arising distally to* DC^2, M^1 *rarely stalked; antenna short* . . — 64. Genus Rhomborista, Warren.
Hindwing with scarcely-marked basal expansion, DC *normal,* M^1 *always stalked; antenna moderate* . . . . — 62. Genus Agathiopsis, Warren.

17. *Wings deep golden* . . . . . 160. Genus Xanthodura, Butler.
Wings not deep golden . . . . . 18.

18. *Hindtibia in* ♂ *without spurs.* . . . . . 19.
Hindtibia in ♂ *with spurs* . . . . . 20.

19. *Antenna in* ♂ *bipectinate* . . . . . 108. Genus Eretmopus, Turner.
Antenna in ♂ *simple* . . . . . 123. Genus Anoplosceles, Warren.

20. *Metathorax crested; antenna with tuft at base* 1) . . . . 61. Genus Uliocnemis, Warren.
Metathorax not crested; antenna without marked tuft at base . . . . . 21.

21. *Hindtibia in* ♂ *with two spurs* 2) . . . . . 22.
Hindtibia in ♂ *with four spurs* 3) . . . . . 39.

22. *Palpus minute* 4) . . . . . 23.
Palpus moderate to long. . . . . . 26.

23. *Abdomen crested.* . . . . . 133. Genus Pseudhemithea, Bastelberger.
Abdomen not crested. . . . . . 24.

24. *Antenna in* ♂ *simple* . . . . . 132. Genus Neromia, Staudinger (part.).
Antenna in ♂ *bipectinate* . . . . . 25.

25. *Both wings with* M^1 *remote at origin from* R^3 . . . . 106. Genus Pentheochlora, nov. gen., Prout.
Both wings with M^1 *closely approximated to* R^3 *or stalked.* — 144. Genus Prosomphax, Warren.

26. *Hindtibia in* ♀ *with two spurs* . . . . . 27.
Hindtibia in ♀ *with four spurs* 5). . . . . 32.

27. *Abdomen crested.* . . . . . 28.
Abdomen not crested. . . . . . 29.

28. *Antenna in* ♂ *and sometimes in* ♀ *bipectinate* . . . . — 94. Genus Cheroscelis, nov. gen., Prout.
Antenna not bipectinate . . . . . 131. Genus Cyclothea, nov. gen., Prout.

29. *Rather large moths; tongue wanting;* ♀ *antenna bipectinate.* — 148. Genus Paraprasina, Warren.
Moderate or small moths; tongue present; ♀ *antenna not bipectinate.* . . . . . 30.

30. *Palpus in* ♀ *with third joint elongate.* . . . . . 31.
Palpus in ♀ *with third joint not elongate* . . . . . 132. Genus Neromia, Staudinger (part.).

31. *Hindwing rounded; forewing with* SC^1 *from cell* . . . — 149. Genus Microloxia, Warren.
Hindwing quadrate, with small tail at R^3; *forewing with* SC^1 *stalked.* . . . . . 150. Genus Pamphlebia, Warren.

1) Further distinguished from nearly all the succeeding genera (except *Comibæna* and *Argyrographa*) by stout, strongly rough-haired second joint of palpus and strongly tufted foretibia; from *Comibæna* and *Argyrographa* by abdominal crests and pectinate ♀ antenna.

2) In *Oinospila* sometimes vestiges of a second pair.

3) In *Chrysochlorona* sometimes three only.

4) Here probably belongs also *Mesurodes*, ♂ unknown.

5) Only in *Episothalma* and *Culpinia* somewhat unstable.

32. *Hindtibia in ♂ with terminal spurs wanting* 1). . . . 114. Genus Xenospila, Swinhoe.
Hindtibia in ♂ with median spurs wanting. . . . . 33.
33. *Hindwing with termen crenulate or excised between* R^1 *and* R^3. . . . . 34.
Hindwing with termen not crenulate or excised . . . . . 35.
34. *Forewing with termen usually crenulate; abdomen crested; ♂ antenna not pectinate*. . . . . 120. Genus Episothalma, Swinhoe.
Forewing with termen not crenulate; abdomen not crested; ♂ antenna bipectinate . . . . . 96. Genus Culpinia, nov. gen., Prout.
35. *Forewing with* SC^1 *stalked, running into* C . . . . . 134. Genus Diplodesma, sect. I, II, III, [Warren.
Forewing with SC^1 *from cell, not running into* C . . . . . 36.
36. *Abdomen with strong curled crests*. . . . . 121. Genus Lophocrita, Warren.
Abdomen with crests small or wanting . . . . . 37.
37. *Hindwing with* C *approximated to cell, not anastomosing,* R^2 *from close to* R^1; *♂ antenna bipectinate; abdomen not crested*. . . . . 113. Genus Gigantothea, nov. gen., Prout.
Hindwing with C *anastomosing at a point,* R^2 *normal; ♂ antenna ciliated; abdomen often slightly crested* . . . . . 38.
38. *Hindwing angled or tailed; abdomen with small crests*. . 122. Genus Hemithea, Duponchel.
Hindwing rounded or weakly bent; abdomen without (or with at most two very small) crests. . . . . 124. Genus Chlorissa, Stephens.
39. *Hindwing with* DC *continuously and extremely oblique* . 107. Genus Thalassodes, Guenée.
Hindwing with DC *not so*. . . . . 40.
40. *Both wings with* DC^3 *extremely oblique,* DC^2 *vertical or oblique inwards* . . . . . 112. Genus Oxychora, Warren.
Both wings with DC *not so* . . . . . 41.
41. *Hindwing with termen toothed at* R^1 *and* R^3, *excised between*. . . . . 42.
Hindwing with termen not so shaped . . . . . 43.
42. *Hindwing with* M^1 *stalked*. . . . . 98. Genus Bathycolpodes, nov. gen., Prout.
Hindwing with M^1 *widely separate* . . . . . 95. Genus Heterocrita, Warren.
43. *Forewing with termen excised between apex and* R^3. . . 100. Genus Hypocœla, Warren (part.) 2).
Forewing with termen not so shaped . . . . . 44.
44. *Forewing falcate at apex* . . . . . 45.
Forewing not falcate at apex 3). . . . . 47.
45. *Antenna in ♂ simple* . . . . . 99. Genus Chlorodrepana, Warren.
Antenna in ♂ bipectinate . . . . . 46.
46. *Falcation small and sharp; abdomen not crested*. . . . 140. Genus Heteresthes, Warren.
Falcation larger and blunter; abdomen crested . . . . 100. Genus Hypocœla, Warren (humidaria).
47. *Hindwing extremely produced to tornus* . . . . . 48.
Hindwing not extremely produced to tornus . . . . . 49.
48. *Tongue weak; antenna in ♂ bipectinate* . . . . . 69. Genus Chlorochæta, Warren.
Tongue well-developed; antenna in ♂ ciliated . . . . 118. Genus Urolitha, Meyrick.

1) Or entirely vestigial.
2) Also in the ♀ of *Antharmostes papilio*; but in that species the ♀ antenna is simple, in *Hypocoela* (so far as yet known . *uniformis, turpisaria*) bipectinate.
3) Of cours · this does not preclude the presence of a minute acute point at apex, such as may appear sexually or in individual species (compare *Omphax*, etc. entirely without generic significance.

40. *Palpus in both sexes short, with terminal joint small* . . . . . 50.
Palpus moderate to long, with terminal joint in ♀ usually elongate . . . . . 53.
50. *Abdomen with series of well-developed crests* . . . . . 142. Genus Celidomphax, nov. gen., Prout.
Abdominal crests slight or wanting . . . . . 51.
51. *Tongue developed; palpus rarely minute; abdomen never crested; antenna moderate* . . . . . 139. Genus Chlorocoma, Turner.
Tongue weak; palpus usually minute: abdomen often with minute crests; antenna rather short . . . . . 52.
52. *Antenna in both sexes moderately to strongly bipectinate.* . 141. Genus Heterorachis, Warren.
Antenna simple, or in ♂ only shortly bipectinate . . . 143. Genus Omphax, Guenée.
53. *Tongue weak; both wings with termen strongly ventricose* . 102. Genus Perithalera, nov. gen., Prout.
Tongue well-developed 1); *wings not so shaped* . . . . . 54.
54. *Hindwing quadrate, or with pronounced tail or angle at* R^3 . . . . . 55.
Hindwing smooth, or at most slightly bent at R^3 . . . . . 61.
55. *Hindwing long and narrow, termen dentate, tail at* R^3 *long* . . . . . 115. Genus Maxates, Moore.
Hindwing not so shaped . . . . . 56.
56. *Antenna in ♂ bipectinate* . . . . . 57.
Antenna in ♂ not bipectinate . . . . . 59.
57. *Hindwing with tail slight; both wings with* R^2 *arising close to apex of cell; ♂ hindleg with one median spur usually weak or wanting; ♀ palpus with third joint very long* . 103. Genus Chrysochlorcma, Warren.
Hindwing with tail usually pronounced 2); R^2 *separate at origin; ♂ hindleg with both median spurs developed; ♀ palpus with third joint usually not very long* . . . . . 58.
58. *Abdomen with slight crests* 3) . . . . . 101. Genus Antharmostes, Warren.
Abdomen without crests . . . . . 104. Genus Gelasma, Warren.
59. *Hindwing with* SC^2 *connate or barely stalked; abdomen not crested* . . . . . 116. Genus Idiochlora, nov. gen., Prout.
Hindwing with SC^2 *well stalked: abdomen usually crested.* . . . . . 60.
60. *Abdomen with strong curved crests.* . . . . . 119. Genus Mixolophia, Warren.
Abdominal crests compact and metallic, or wanting . . . 117. Genus Metallochlora, Warren (part.).
61. *Antenna in ♂ bipectinate* . . . . . 62.
Antenna in ♂ not bipectinate . . . . . 117. Genus Metallochlora, Warren (part.).
62. *Palpus with second joint strong, rough-scaled above and beneath* . . . . . 63.
Palpus with second joint normal . . . . . 64.
63. *Wings broad; forewing with* SC^2 *not anastomosing with* SC^1; *♂ hindtibia almost always with terminal process* . . 68. Genus Comibæna, Hübner (part.).
Wings elongate; forewing with SC^2 *anastomosing with* SC^1: *♂ hindtibia without process* . . . . . 147. Genus Argyrographia, nov. gen., Prout.

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1) There may possibly be one or two individual exceptions in the species of succeeding genera, but we have not noted such.
2) Slight in *Gelasma trepidevittata*, which is quite doubtfully placed
3) If these are ever entirely absent, we are unable to differentiate the genus rigidly. See our note thereon.

64. *Hindwing with* C *anastomosing near base with cell;* ♂ *hindtibia with process, tarsus very short* . . . . . 110. Genus Endemia, Warren.
Hindwing with C *free;* ♂ *hindleg usually normal* . . . . . 65.
65. *Abdomen with slight crests* . . . . . 111. Genus Strepsichlora, Warren.
Abdomen without crests . . . . . 109. Genus Prasinocyma, Warren.

Group VI

1. *Forewing with* SC^1 *and* SC^2 *stalked or coincident from cell.* 164. Genus Cacochloris, nov. gen., Prout.
Forewing with SC^2 (*often* SC^1 *also*) *from stalk of* SC^{3-5} 2
2. *Hindwing with* C *anastomosing with cell to at least one-half* . . . . . 3.
Hindwing with C *free, or anastomosing near base only* . . . . . 7.
3. *Hindtibia with four spurs* . . . . . 4.
Hindtibia with two spurs . . . . . 5.
4. *Palpus with third joint minute; forewing with* SC^2 *arising after* SC^5 . . . . . 175. Genus Collesis, Warren.
Palpus with third joint moderate to long; forewing with SC^2 *arising before* CS^5 . . . . . 176. Genus Omphacodes, Warren.
5. *Wings narrow* . . . . . 201. Genus Mixeophanes, nov. gen., Prout.
Wings normally shaped. . . . . . 6.
6. *Palpus with second joint rough-scaled;* ♀ *antenna bipectinate.* 199. Genus Allochrostes, nov. gen., Prout.
Palpus with second joint smooth; ♀ *antenna not bipectinate.* 200. Genus Xenochlorodes, Warren.
7. *Tongue absent or vestigial* . . . . . 8.
Tongue developed . . . . . 13.
8. *Hindwing with termen incurved or excised between* R^1 *and* R^3. . . . . 9.
Hindwing with termen not incurved or excised . . . . . 10.
9. *Hindtibia with four spurs* . . . . . 171. Genus Dolosis, nov. gen., Prout.
Hindtibia with two spurs . . . . . 169. Genus Dyschloropsis, Warren.
10. *Small species; palpus less than one-half diameter of eye; hindwing with* C *diverging after point-anastomosis* . . 196. Genus Cenochlora, Warren.
Moderate-sized species; palpus more than one-half; hindwing with C *approximated to near middle of cell* . . . . . 11.
11. *Palpus with second joint very strong, much longer than first joint* . . . . . 166. Genus Aglossochloris, nov. gen., Prout.
Palpus not so. . . . . . 12.
12. *Palpus very slender; hindwing with termen well rounded* . 183. Genus Neurotoca, Warren.
Palpus moderate [1]*; hindwing with termen little rounded, tornus prolonged* . . . . . 168. Genus Holoterpna, Püngeler.
13. *Abdomen well crested* . . . . . 184. Genus Lophostola, nov. gen., Prout.
Abdomen not or scarcely crested . . . . . 14.
14. *Hindtibia with terminal spurs only* . . . . . 15.
Hindtibia with all spurs . . . . . 21.
15. *Hindwing quadrate, strongly angled at* R^3 . . . . . 185. Genus Gonochlora, Swinhoe.
Hindwing not so shaped . . . . . 16.

1) Rather short in *pruinosata*.

16. *Hindwing dentate, excised between* R^1 *and* R^3 . . . . . 17.
Hindwing rounded . . . . . 18.
17. *Palpus with third joint very small; hindwing with* C *anastomosing briefly,* M^1 *not stalked* . . . . . 170. Genus Thalera, Hübner.
Palpus with third joint moderate to long; hindwing with C *free,* M^1 *long-stalked* . . . . . 189. Genus Lambornia, nov. gen., Prout.
18. *Palpus short* . . . . . 19.
Palpus moderate to long . . . . . 20.
19. *Antenna in* ♂ *with long pectinations; forewing with* SC^1 *from cell; hindwing with* M^1 *not stalked* . . . . . 195. Genus Cymatophlex, Turner.
Antenna in ♂ *never with long pectinations; forewing with* SC^1 *usually stalked; hindwing with* M^1 *usually stalked* . . . . . 197. Genus Mixocera, Warren.
20. *Face and femora smooth; both wings with* M^1 *stalked or at least connate* . . . . . 198. Genus Eucrostes, Hübner.
Face rough-scaled, femora hairy; both wings with M^1 *widely separate at origin* . . . . . 167. Genus Iulops, nov. gen., Prout.
21. *Palpus with second joint stout, rather long, strongly rough-scaled above and beneath* . . . . . 165. Genus Ecchloris, Hübner.
Palpus normal or slender . . . . . 22.
22. *Both wings with termen strongly crenate* . . . . . 191. Genus Paramaxates, Warren.
Both wings with termen not strongly crenate . . . . . 23.
23. *Palpus short to quite moderate, third joint in neither sex elongate* 1); *antenna in* ♀ *usually bipectinate* . . . . . 24.
Palpus moderate to long, third joint, at least in ♀, *elongate; antenna in* ♀ *never bipectinate* . . . . . 30.
24. *Hindwing narrow, with* C *long-approximated to cell; forewing with* SC^2 *anastomosing with* SC^3 . . . . . 181. Genus Leucesthes, Warren.
Hindwing not narrow 2); *forewing with* SC^2 *not anastomosing with* SC^3 3) . . . . . 25.
25. *Forewing with* SC^1 *and* R^1 *stalked with* SC^{2-5} . . . . 174. Genus Acollesis, Warren.
Forewing with SC^1, *and usually* R^1, *from cell* . . . . . 26.
26. *Palpus usually minute, second joint not or scarcely rough-scaled beneath* . . . . . 27.
Palpus not minute, second joint rough-scaled beneath . . . . . 29.
27. *Hindwing with* C *long-approximated to cell; both wings with* M^1 *widely separate; palpus minute* . . . . . 28.
Hindwing with C *diverging from near base,* M^1 *approximated, connate or stalked; palpus not minute* 4) . . . 182. Genus Hemistola, Warren
28. *Wings broad,* R^2 *of both from close to* R^1 . . . . . 172. Genus Nothoterpna, Warren.
Wings narrow, R^2 *of both not from close to* R^1 . . . . 173. Genus Chlorosterrha, nov. gen., Prout.
29. *Forewing with* SC^2 *closely approaching or anastomosing*

1) Except in one or two pectinated ♀♀ of *Hemistola*, of doubtful location.
2) Except in *Chlorosterrha*.
3) Except sometimes in *Maxochroa*.
4) On the first two of these characters, *H. incommoda* would rather be a *Nothoterpna* or *Chlorosterrha*; on the third character, *haploa* would be. A revision of the African species must await further and better material.

with SC^3; *hindwing ochreous, with C closely approximated to one-half cell* . . . . . 180. Genus Mixochroa, Warren.

Forewing with SC^2 *separate from* SC^3; *hindwing not ochreous, C diverging before one-half cell.* . . . . . 179. Genus Euloxia, Warren.

30. *Forewing with* DC^3 *arising markedly distally to* DC^2. . . . . 31.

Forewing with DC *normal* 1). . . . . 32.

31. *Hindwing with termen crenulate and tailed* . . . . . 188. Genus Berta, Walker.

Hindwing with termen rounded, or slightly elbowed at R^3. 190. Genus Comostola, Meyrick.

32. *Hindwing with termen angled or tailed* 2) . . . . . 33.

Hindwing with termen not angled or tailed . . . . . 34.

33. *Forewing with apex acutely produced,* SC^1 *from cell; hindwing strongly tailed* . . . . . 186. Genus Chloromma, Warren.

Forewing with apex not acutely produced, SC^1 *nearly always stalked; hindwing not strongly tailed* . . . 187 Genus Iodis, Hübner.

34. *Both wings with* M^1 *remote at origin* . . . . . 194. Genus Neothela, Turner.

Both wings with M^1 *connate or stalked* 3) . . . . . 35.

35. *Hindwing elongate, termen strongly rounded.* . . . . . 192. Genus Pyrrhorachis, Warren.

Hindwing not so. . . . . . 36.

36. *Forewing with* SC^1 *and both wings with* M^1 *long-stalked* . 191. Genus Comostolopsis, Warren.

Forewing with SC^1 *from cell; both wings with* M^1 *quite short-stalked* . . . . . 193. Genus Chloëres, Turner.

B. — New World Genera

1. *Palpus with long, forward-projecting hairs above and beneath; wings narrow, fuscous* . . . . . 40. Genus Xenopepla, Prout.

Palpus not so; wings rarely narrow, never fuscous . . . . . 2.

2. *Large moths; hindwing with subdiaphanous patch near base.* 50. Genus Rhodochlora, Warren.

Moderate or small (very rarely rather large) moths; hindwing without subdiaphanous patch near base. . . . . . 3.

3. *Forewing with apex acute, subfalcate; hindwing with tornus prolonged, termen (especially in* ♂) *straight* 4) . . . . . 4.

Wings not so shaped . . . . . 5.

4. *Frenulum in* ♀ *wanting; hindwing concolorous.* . . . 79. Genus Tachyphyle, Butler.

Frenulum in ♀ *present; hindwing discolorous* . . . . 78. Genus Tachychlora, nov. gen., Prout.

5. *Hindtibia in* ♂ *with terminal spurs only* . . . . . 6.

Hindtibia in ♂ *with all spurs* . . . . . 25.

6. *Hindtibia in* ♀ *with terminal spurs only* . . . . . 7.

Hindtibia in ♀ *with all spurs* . . . . . 23.

7. *Frenulum developed in both sexes* . . . . . 74. Genus Chlorosea, Packard.

Frenulum wanting or vestigial in ♀ . . . . . 8.

8. *Frenulum wanting in* ♂ 9

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1) In *Iodis albidentula* formed as in *Berta*, from which other (usually subordinate) characters separate it The *hindwing* in *Berta* usually has DC nearly as in forewing, but this is of less use generically, the form being shared by a few *Iodis* : *unifascia*, *iridescens* (slightly), *opalaria* (sometimes), etc.

2) Except *Iodis albidentula* and *micra*; angle very slight in *unifascia*.

3) Separate, but not remote, in *Pyrrhorachis* (?) *caerulea*.

4) Both these genera have the median spurs rudimentary or atrophied and the terminals very unequal.

Frenulum present in ♂ . . . . . 10.

9. *Palpus in both sexes minute; hindwing with* C *approximated to cell, gradually diverging.* . . . . . 178. Genus Anomphax, Warren.

Palpus moderate to long; hindwing with C *anostomosing with cell at a point, rapidly diverging* . . . . . 198. Genus Eucrostes, Hübner.

10. *Abdomen crested* . . . . . 11.

Abdomen not crested . . . . . 16.

11. *Metathorax tufted;* ♂ *hindtarsus much abbreviated* . . 93. Genus Lophochorista, Warren.

Metathorax not tufted; ♂ *hindtarsus rarely abbreviated* . . . . . 12.

12. *Abdominal crests strong (compact, rounded, glossy, often more or less metallic)* . . . . . 13.

Abdominal crests slight (flimsy, curved hairs) . . . . 86. Genus Leptolopha, Warren.

13. *Palpus in both sexes minute* 1). . . . . 91. Genus Progonodes, Warren.

Palpus in both sexes not minute . . . . . 14.

14. *Forewing with* SC^1 *stalked,* SC^2 *usually arising after* SC^5. 89. Genus Auophyllodes, nov. gen., Prout.

Forewing with SC^1 *from cell,* SC^2 *always arising before* SC^5. . . . . 15.

15. *Palpus in* ♀ *with third joint long; hindwing usually with raised white cell-spots,* DC^3 *usually arising distally to* DC^2, M^1 *stalked* . . . . . 90. Genus Oospila, Warren.

Palpus in ♀ *slender, with third joint rather short; hindwing without raised white cell-spots,* DC *normal,* M^1 *not stalked* . . . . . 88. Genus Auophylla, Warren.

16. *Eye small.* . . . . . 125. Genus Mesothea, Warren.

Eye normal . . . . . 17.

17. *Forewing with* SC^2 *arising after* SC^5 . . . . . 18.

Forewing with SC^2 *arising before* SC^5 . . . . . 19.

18. *Hindwing with* C *anastomosing strongly with cell; wings light green* . . . . . 138. Genus Pachycopsis, Warren.

Hindwing with C *free; wings deep golden* . . . . . 159. Genus Xanthoxena, Warren.

19. *Hindwing with* C *anastomosing strongly with cell* . . . . . 20.

Hindwing with C *anastomosing at a point only, or free.* . . . . . 21.

20. *Palpus minute; hindwing concolorous, with costa short.* . 157. Genus Callisteuma, nov. gen., Prout.

Palpus not minute; hindwing discolorous, with costa long. 75. Genus Cheteoscelis, nov. gen., Prout.

21. *Palpus minute; tongue atrophied* 2) . . . . . 158. Genus Dyscheilia, Dognin.

Palpus in ♂ *moderate, third joint in* ♀ *very long; tongue developed* . . . . . 22.

22. *Hindwing with* C *anastomosing with cell at point near base.* 151. Genus Eueana, nov. gen., Prout.

Hindwing with C *closely approximated to cell to beyond one-half* . . . . . 156. Genus Telotheta, Warren.

23. *Hindwing nearly always strongly angled or tailed at* R^3; *forewing with* SC^1 *nearly always stalked* 3). . . . 127. Genus Chloropteryx, Hulst.

Hindwing rounded or slightly bent at R^3, *forewing with* SC^1 *from cell* . . . . . 24.

1) See also Genus 92, *Rhombochlora*.

2) In the absence of the ♂ it is not certain that this genus does not belong in Group VI (♂ frenulum absent). It is certainly very specialized.

3) When not stalked, either connate or closely approximated. At the same time, it is possible this genus will prove to intergrade with *Chlorochlamys*.

24. *Antenna in ♂ bipectinate* . . . . . 126. Genus Chlorochlamys, Hulst.
Antenna in ♂ not bipectinate . . . . . 124. Genus Chlorissa, Stephens.
25. *Forewing with* SC^2 *arising after* SC^5 . . . . . 26.
Forewing with SC^2 *arising before* SC^5 1) . . . . . 27.
26. *Hindwing with* C *anastomosing more or less strongly with cell* . . . . . 137. Genus Hydata, Walker.
Hindwing with C *anastomosing or appressed at a point near base only* . . . . . 136. Genus Prohydata, Schaus.
27. *Frenulum wanting in both sexes* . . . . . 28.
Frenulum present in ♂, and sometimes in ♀ . . . . . 30.
28. *Hindwing with* C *anastomosing strongly with cell* . . . 177. Genus Merochlora, nov. gen., Prout.
Hindwing with C *free* . . . . . 29.
29. *Both wings with* DC *normal* . . . . . 163. Genus Chloractis, Warren.
Both wings with DC^3 *arising far distally to* DC^2. . . 162. Genus Cathydata, nov. gen., Prout.
30. *Forewing with termen irregular, with excision in anterior half* . . . . . 31.
Forewing with termen regular . . . . . 33.
31. *Wings gaily coloured; hindwing with* C *free* . . . . 82. Genus Pœcilochlora, Warren.
Wings not gaily coloured; hindwing with C *anastomosing at a point or very briefly with cell* . . . . . 32.
32. *Hindwing with termen crenulate; ♂ antenna simple* . . 128. Genus Euallœa, Warren.
Hindwing with termen not crenulate; ♂ antenna bipectinate 129. Genus Neocrasis, Warren.
33. *Hindwing toothed at* R^1 *and* R^3. . . . . 81. Genus Neagathia, Warren.
Hindwing not toothed, or toothed (or bent) at R^3 *only* . . . . . 34.
34. *Wings thinly scaled, hyaline* . . . . . 83. Genus Hyalochlora, nov. gen., Prout.
Wings normally scaled . . . . . 35.
35. *Abdomen strongly crested* . . . . . 87. Genus Racheolopha, Warren.
Abdomen not or scarcely crested . . . . . 36.
36. *Hindwing with* C *anastomosing with cell near base* . . . . . 37.
Hindwing with C *free, or at most anastomosing at a point* . . . . . 38.
37. *Anastomosis slight; abdomen with minute dorsal crest or embossed spots* . . . . . 70. Genus Racheospila, sect. II, Guenée
Anastomosis moderate; abdomen smooth dorsally . . . . 73. Genus Synchlora, Guenée. [(part.).
38. *Coloration mainly green* . . . . . 39.
Coloration very variegated . . . . . 44.
39. *Palpus short; hindwing with costa long,* C *long-approximated to cell, gradually diverging* . . . . . 76. Genus Paromphacodes, Warren.
Palpus moderate to long; hindwing with C *normal* . . . . . 40.
40. *Antenna in ♂ bipectinate* . . . . . 41.
Antenna in ♂ not bipectinate . . . . . 72. Genus Dryalopsis, Warren.
41. *Frenulum present in both sexes* . . . . . 42.
Frenulum wanting or vestigial in ♀ . . . . . 43.
42. *Palpus in ♀ with third joint small* . . . . . 71. Genus Nemoria, Hübner.
Palpus in ♀ with third joint exposed, usually much elongated 70. Genus Racheospila, Guenée (part.).

1) Except in *Racheospila* (?) *minor*, from which *Hydata* and *Prohydata* differ in shape, in their hyaline or semihyaline wings, etc.

43. *Palpus with second joint strongly rough-scaled above and beneath, third joint somewhat rough-scaled, in ♀ moderate; foretibia tufted* . . . . . 85. Genus Dichorda, Warren.

Palpus with second joint more shortly scaled, third joint smooth, in ♀ very long; foretibia not tufted . . . . 80. Genus Phrudocentra, Warren.

44. *Forewing with* SC^1 *running into* C; *hindwing not produced towards tornus* . . . . . 84. Genus Chrotochlora, Warren.

Forewing with SC^1 *free; hindwing produced towards tornus* 77. Genus Pyrochlora, Warren.

Note. — In all the descriptions in the following pages the wing-expanse is given according to the extreme tip-to-tip measurement. The adoption of the old continental method of taking the average expanse of set specimens resulted in certain inconsistencies and inaccuracies which far more than outweighed any possible convenience.

Group I

1. Genus PROTOPHYTA, Turner

Protophyta. Turner, Proc. Linn. Soc. N. S. Wales, Vol. 35, p. 648 (1910).

Characters. — Build rather slender. Face smooth. Palpus moderate, first joint long-haired, second joint rough-haired above and beneath, third joint moderate. Tongue developed. Antenna in ♂ bipectinate, with apices simple. Thorax not crested. Pectus densely hairy. Hindtibia in ♂ not dilated, all spurs well developed. Abdomen not crested. Frenulum fully developed. Forewing with costa slightly arched, apex not acute, termen oblique, crenulate, DC^2 slightly oblique inwards, DC^3 strongly incurved (cell more produced anteriorly than posteriorly), SC^1 from cell, anastomosing with C, SC^2 from cell, R^1 separate, M^1 separate; hindwing with termen dentate, the teeth on R^1 and R^3 more prominent, DC nearly as in forewing, C closely approximated to cell to well beyond middle, SC^2 separate, R^2 from near R^1, M^1 separate.

Egg. — Undescribed.

Larva. — Undescribed, apparently on tea-tree.

Pupa. — Undescribed, in a silken cocoon on bark of tea-tree (Lower).

Type of the genus : *Protophyta castanea* (Lower) = *Pseudoterpna castanea*, Lower (1910).

Geographical distribution of species. — Australian.

1. *P. castanea* (Lower). New South Wales.

Pseudoterpna castanea, Lower, Proc. Linn. Soc. N. S. Wales, Vol. 23, p. 45 (1898).
Protophyta castanea, Turner, ibidem, Vol. 35, p. 648 (1910).

2. Genus HELIOMYSTIS, Meyrick

Heliomystis. Meyrick, Proc. Linn. Soc. N. S. Wales (2), Vol. 2, p. 900 (1888).

Characters. — « Face shortly hairy. Palpus moderate, porrect, basal and second joints densely hairy beneath, second joint hairy on upper surface, terminal joint moderate. Tongue well developed.

Antenna in ♂ pectinate nearly to apex. Thorax with a dense posterior crest; beneath densely hairy. Posterior tibia with all spurs present; in ♂ dilated, with internal groove and tuft. Abdomen with strong median dorsal crests. Frenulum and retinaculum in ♂ strong. Forewing with SC^1 anastomosing with C, SC^2 arising separately from cell, R^1 separate, R^3 and M^1 separate; hindwing with DC incurved, not oblique, C closely approximated to cell to well beyond middle, SC^2 and R^1 separate, R^3 and M^1 separate » (Turner, *Proc. Linn. Soc. N. S. Wales*, Vol. 35, p. 647). « Forewing with costa slightly arched, termen rounded, rather oblique, waved; hindwing with termen crenate, tolerably rounded, slightly bent in middle » (Meyrick).

Early stages unknown.

This genus is unknown to us in nature, but would appear to be the parent of *Dindica*, Moore.

Type of the genus : *Heliomystis electrica*, Meyrick (1888).

Geographical distribution of species. — Australian.

1. *H. electrica*, Meyrick. Victoria.
   Heliomystis electrica, Meyrick, Proc. Linn. Soc. N. S. Wales (2), Vol. 2, p. 900 (1888).

3. Genus RHUMA, Walker

Rhuma. Walker, List Lep. Ins. Brit. Mus. Vol. 21, p. 483 (1860).

Characters. — Face smooth. Palpus moderate, stout, second joint with thick but appressed scales, third joint smooth, rather short, obtuse. Tongue developed. Antenna in ♂ dentate, with fascicles of rather short cilia; in ♀ nearly simple. Thorax with a small posterior crest (fide Turner). Pectus and femora densely hairy. Hindtibia in ♂ somewhat dilated, with hair-pencil; all spurs present. Abdomen with strong dorsal crests. Frenulum fully developed. Forewing with costa slightly arched, apex not acute, termen entire, gently convex, oblique, cell about one-half, DC^2 vertical. DC^3 oblique, SC^1 from cell, free, SC^2 from cell, SC^{3-5} from well before apex of cell, R^2 from quite near R^1, M^1 separate; hindwing with apex rounded, termen entire, rounded, tornus moderately rounded, cell somewhat less than one-half, DC as in forewing, C closely approximated to cell to beyond middle, SC^2 separate, R^2 from close to R^1, M^1 separate.

Early stages unknown.

Type of the genus : *Rhuma subaurata*, Walker (1860).

Geographical distribution of species. — Australian.

1. *R. subaurata*, Walker. — Pl. 1, Fig. 1. Queensland.
   Rhuma subaurata, Walker, List Lep. Ins. Brit. Mus. Vol. 21, p. 484 (1860).
   Hypochroma variipunctata, Lucas (MS.?).

4. Genus STERICTOPSIS, Warren

Sterictopsis. Warren, Novit. Zool. Vol. 5, p. 257 (1898).

Characters. — Face smooth. Palpus quite moderate, second joint rather long-haired below and rough-haired above, third joint small, smoother-scaled. Tongue well developed. Antenna longish, in ♂ pectinate, with apex simple (fide Turner), in ♀ nearly simple. Metathorax crested. Pectus densely hairy. Femora hairy. Hindtibia in ♂ dilated with groove and tuft of hair (fide Turner), in both sexes

with all spurs. Tarsi moderately spinulose. Abdomen crested. Frenulum fully developed. Forewing rather narrow, costa rather straight, gently arched distally, apex moderate, termen rather straight, oblique posteriorly, tornus moderate, cell one-half, SC^1 free, or anastomosing with C, or with C and SC^2, SC^2 from cell, R^1 about connate with SC^{3+5}, R^2 from above middle of cell, M^1 separate; hindwing rather narrow, angles somewhat rounded, termen rounded, cell one-half, DC^3 oblique posteriorly, C closely appressed to cell to near one half, then gradually diverging, SC^2 short-stalked with R^1, R^2 from very near R^1, M^1 separate.

Early stages unknown 1).

Type of the genus : *Sterictopsis inconsequens*, Warren (1898).

Geographical distribution of species. — Australian.

1. *S. inconsequens*, Warren. Queensland, Victoria.

Sterictopsis inconsequens, Warren, Novit. Zool. Vol. 5, p. 257 (1898).
? *Pseudoterpna argyraspis*, Lower, Trans. Roy. Soc. S. Austral. Vol. 17, p. 157 (1893) (nom. vetust. sed dubium).
Sterictopsis paratorna, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 35, p. 645 (1910) [nec Meyrick 2)].

5. Genus ARCHÆOBALBIS, nov. gen., Prout

Archæobalbis, nov. gen. Prout.

Characters. — Build robust. Face usually somewhat protuberant, normally scaled, or slightly roughened. Palpus moderate, second joint densely scaled above and beneath, third joint moderate or rather short, smooth-scaled. Tongue developed. Antenna long or moderate, in both sexes virtually simple. Metathorax not crested. Pectus densely hairy. Femora long-haired. Hindtibia in both sexes with all spurs developed, in ♂ usually dilated, with strong hair-pencil, sometimes also with a short terminal process. Abdomen with small paired dorsal crests. Frenulum fully developed. Forewing with costa somewhat arched or nearly straight, apex moderate, termen oblique, subcrenulate, cell about one-half, DC incurved, SC^1 connected at point or by short bar with C (rarely anastomosing), frequently anastomosing shortly also with SC^2, SC^2 from cell, R^1 connate or separate, M^1 well separate; hindwing with costa short, apex rounded, termen long, crenulate, inner margin long, cell less than one-half, DC^3 incurved, C approximated rather variably to cell (usually rather shortly, never to beyond one-half), very rapidly diverging, SC^2 separate, R^2 characteristic, sometimes rather extreme, M^1 separate (Pl. I, Fig. 9). ♂ genitalia with uncus pointed (in *subopalina* bifid), at either side a spatulate leaf-like arm, gnathos pointed, dentate on the edge, harpe rounded, clasper a short thorn, juxta a horny process *behind* the penis; penis pestillate, ædoeagus with long extended arm, having at the orifice a hatchet-like projection.

Early stages unknown 3).

Type of the genus : *Archaeobalbis viridaria* (Moore) = *Hypochroma viridaria*, Moore.

1) If this is the true *argyraspis*, Lower, a specimen was bred in February from a rough silky cocoon formed beneath the bark of *Eucalyptus rostrata* (Lower).

2) Meyrick's type of *Hypochroma paratorna*, though superficially similar to the present species, is structurally distinct, not only in having SC^2 of forewing strongly stalked with SC^{3+5}, but in being almost without the dorsal crests and in having shorter antennal pectinations; SC^1 anastomoses both with C and with SC^2. The species does not fall into any known genus, but as we have only seen the one specimen, and have had no opportunity to study it side by side with *Sterictopsis* or with the genera of Group II, we abstain from creating a genus for it.

3) Mr H. L. Andrewes has bred *Archaeobalbis subtepens* from larva in the Nilgiris, but we have no description of it.

Geographical distribution of species. — Indo-Malayan, straggling into China.

An interesting genus, not only as being the only extra-Australian which has preserved the primitive venation, but also as being the obvious parent of the following group. Shape of wings, nature of scaling, scheme of coloration (grey to moss-green, hindwing concolorous with forewing), commencement of shortening of cell and of rapid divergence of C of hindwing, and indeed almost all its characters connect it quite closely with them; and were it not for the point of origin of SC^2 it would scarcely be separable from *Neobalbis*, and quite near *Actenochroma*, etc. The genus is fairly homogeneous in structure, though differing slightly in shape, and more markedly in length of antenna and in the ♂ hindtibia. In the first five species the antenna is long (nearly three-fourths the length of costa); in *hypoglauca*, etc. quite moderate. In *farinosa*, and probably *hypoglauca* and *usneata*, the ♂ hindtibia is undilated; in *subopalina* dilated, but without terminal process; in the rest with the process, in varying grades of development. We have not seen *sinapiaria*, Poujade, and only refer it here conjecturally.

1. *A. viridaria* (Moore). — India with Ceylon.
   Hypochroma viridaria, Moore, Proc. Zool. Soc. Lond. p. 632 (1867).
   Actenochroma subochracea, Warren, Novit. Zool. Vol. 1, p. 381 (1894).
   Herochroma viridaria, Swinhoe, Trans. Ent. Soc. Lond. p. 172 (1894).
   Pseudoterpna subtepens (part.), Hampson, Fauna Ind. Moths, Vol. 3, p. 479 (1895) (nec Walker).
   Actenochroma viridaria, Swinhoe, Lep. Het. Oxford Mus. Vol. 2, p. 387 (1900).

2. *A. subtepens* (Walker). — N. India to Celebes.
   Hypochroma subtepens, Walker, List Lep. Ins. Brit. Mus. Vol. 21, p. 438 (1860).
   ? *Actenochroma cristata*, Warren, Novit. Zool. Vol. 1, p. 381 (1894).
   Herochroma subtepens, Swinhoe, Trans. Ent. Soc. Lond. p. 171 (1894).
   Pseudoterpna subtepens (part.), Hampson, Fauna Ind. Moths, Vol. 3, p. 479 (1895).
   Actenochroma subtepens, Swinhoe, Lep. Het. Oxford Mus. Vol. 2, p. 386 (1900).

3. *A. urapteraria* (Walker). — Burma, Borneo.
   Hypochroma urapteraria, Walker. List Lep. Ins. Brit. Mus. Vol. 21, p. 438 (1861).
   Actenochroma urapteraria, Swinhoe, Lep. Het. Oxford Mus. Vol. 2, p. 387 (1900).

4. *A. ochreipicta* (Swinhoe). — N. E. India.
   Actenochroma ochreipicta, Swinhoe, Ann. Mag. Nat. Hist. (7), Vol. 15, p. 166 (1905).
   Pseudoterpna ochreipicta, Hampson, Journ. Bombay Nat. Hist. Soc. Vol. 18, p. 52 (1907).

5. *A. subopalina* (Warren). — India, ? Hong-Kong.
   Actenochroma subopalina, Warren, Novit. Zool. Vol. 1, p. 382 (1894).
   Pseudoterpna subopalina, Hampson, Fauna Ind. Moths, Vol. 3, p. 480 (1895).

6. *A. usneata* (Felder). — N. India.
   Scotopteryx (?) *usneata*, Felder, Reise Novara, Lep. Het. t. 125, f. 12 (1875).
   Pseudoterpna usneata, Hampson, Fauna Ind. Moths, Vol. 3, p. 479 (1895).

7. *A. hypoglauca* (Hampson). — N. India.
   Pseudoterpna hypoglauca, Hampson, Trans. Ent. Soc. Lond. p. 313 (1895).

8. *A. farinosa* (Warren). — **Pl. 1, Fig. 2.** — N. W. Himalayas.
   Actenochroma farinosa, Warren, Proc. Zool. Soc. Lond. p. 350 (1893).
   Pseudoterpna farinosa, Hampson, Fauna Ind. Moths, Vol. 3, p. 480 (1895).

9. *A. sinapiaria* (Poujade) (huj. gen.?). — W. China.
   Hypochroma sinapiaria, Poujade, Ann. Soc. Ent. Fr. Vol. 64, p. 309, t. 6, f. 5 (1895).
   Pseudoterpna sinapiaria, Leech, Ann. Mag. Nat. Hist. (6), Vol. 20, p. 229 (1897).

10. *A. crassipunctata* (Alphéraky) (huj. gen.?). — Turkestan.
    Gnophos crassipunctata, Alphéraky, Stett. Ent. Zeit. Vol. 49, p. 69 (1888); Roman. Mém. Lép. Vol. 9, p. 226, t. 8, f. 7 (1897).

Group II

6. Genus NEOBALBIS, nov. gen., Prout

Neobalbis, nov. gen. Prout.

Characters. — Build robust. Frons protuberant, densely scaled. Palpus moderate to longish, first joint long-scaled beneath, second joint stout, rough-scaled above, moderately long-scaled beneath, third joint smooth, in ♀ rather long. Tongue developed. Antenna in both sexes virtually simple. Pectus densely hairy. Femora hairy. Hindtibia with all spurs. Metathorax not crested. Abdomen with small paired dorsal crests. Frenulum fully developed. Forewing with costa slightly arched, apex moderate, termen oblique, crenulate, cell somewhat less than one-half, discocellulars incurved, SC^1 from cell, anastomosing with C, SC^2 from well down the stalk of SC^{3-5}, anastomosing at a point with SC^1, R^1 separate, R^2 from slightly above middle of discocellulars, M^1 separate; hindwing with costa short, apex rounded, termen long, strongly crenate, inner margin long, cell scarcely two-fifths, DC^3 incurved, C approximated to cell for some distance near base, then sharply diverging, SC^2 separate, R^2 characteristic, M^1 well separate.

Early stages unknown.

The evolutionary importance attaching to the point of origin of SC^2 of the forewing necessitates the erection of this genus for a few species which are evidently in the direct line of descent from *Archaeobalbis*, agreeing absolutely therewith in facies, and scarcely differing structurally except in the position of that vein. It would, indeed, be possible to merge our new genus with its relatives *Herochroma* and *Actenochroma*, which, however, have virtually lost the abdominal crests, and have other features of their own.

Type of the genus : *Neobalbis elaearia* (Hampson) = *Pseudoterpna elaearia*, Hampson.

Geographical distribution of species. — N. India, Java, Formosa.

1. *N. elaearia* (Hampson). Sikkim, Khâsis.
   Pseudoterpna elaearia, Hampson, Journ. Bombay Nat. Hist. Soc. Vol. 14, p. 654 (1903).
   Actenochroma subochracea (part.), Swinhoe, Ann. Mag. Nat. Hist. (7), Vol. 17, p. 285 (1906) (nec Warren).
2. *N. flavibasalis* (Warren). Java.
   Actenochroma flavibasalis, Warren, Novit. Zool. Vol. 1, p. 381 (1894).
3. *N. montana* (Bastelberger). Formosa.
   Actenochroma montana, Bastelberger, Intern. Ent. Zeit. Guben, Vol. 4, p. 248 (1911).

Note. — *Hypochroma sinapiaria*, Poujade, and *Gnophos crassipunctata*, Alpheraky, which we have not seen, but have referred with a query to *Archaeobalbis*, may equally well belong to the present genus.

7. Genus HEROCHROMA, Swinhoe

Herochroma, Swinhoe, Ann. Mag. Nat. Hist. (6), Vol. 12, p. 148 (1803).
Hierochroma, Sharp, Zool. Record, p. 283 (1803).

Characters. — Face moderately protuberant. Palpus moderate, stout, second joint densely rough scaled, third joint in ♂ quite short, blunt (♀ unknown). Tongue developed. Antenna in ♂ simple. Pectus and femora densely hairy. Hindtibia in ♂ somewhat dilated, with tuft of hairs and with a well-developed terminal process (**Fig. 4**), all spurs present. Abdominal crests exceedingly slight, often wanting. Frenulum fully developed. Forewing with costa arched, apex acute, termen subcrenulate, cell nearly one-half, DC incurved, SC^1 from cell, anastomosing at a point or connected with C, SC^2 from stalk of SC^{3-5}, occasionally from near its base, anastomosing at a point with SC^1, R^1 connate or approximated, R^2 scarcely above middle of discocellulars, M^1 well separate from R^3; hindwing with costa short, apex rounded, termen strongly crenate, slightly produced to M^1, inner margin long, cell rather short, DC^3 deeply incurved, C approximated to cell for some distance, sharply diverging before one-half, SC^2 separate, M^1 separate.

Fig. 4

Hindleg of *Herochroma baba*, Swinhoe, ♂.

Early stages unknown.

Probably an almost direct derivative of *Archaeobalbis viridaria*, its hindwing similar in shape, but somewhat exaggerated (narrower, more produced to M^1) and with the hindtibial process more strongly developed.

Type of the genus : *Herochroma baba*, Swinhoe (1893).

Geographical distribution of species. — Assam.

1. *H. baba*, Swinhoe. Khâsis.

Herochroma baba, Swinhoe, Ann. Mag. Nat. Hist. (6), Vol. 12, p. 148 (1893).
Pseudoterpna baba, Hampson, Fauna Ind. Moths, Vol. 3, p. 480 (1895).
Actenochroma baba, Swinhoe, Lep. Het. Oxford Mus. Vol. 2, p. 386 (1900).

8. Genus ACTENOCHROMA, Warren

Actenochroma. Warren, Proc. Zool. Soc. Lond. p. 350 (1893).

Characters. — Face sloping, somewhat protuberant below. Palpus moderate, stout, second joint rough-scaled, third joint in ♂ small, concealed (♀ unknown). Tongue developed. Antenna in ♂ with the joints distinct, ciliated. Pectus densely hairy. Femora somewhat hairy. Hindtibia in ♂ not dilated, all spurs present. Abdominal crests vestigial or wanting. Frenulum fully developed. Forewing with costa slightly arched, apex moderate, termen waved, oblique, cell less than one-half, DC incurved, SC^1 free, SC^2 from stalk of SC^{3-5}, R^1 separate, R^2 from above middle of discocellulars, M^1 separate; hindwing with apex rounded, termen rounded, faintly crenulate, cell short, DC^2 vertical, DC^3 deeply incurved, C approximated to cell to less than one-half, then rapidly diverging, SC^2 well separate, R^2 rather extreme. ♂ genitalia : uncus a long rod, on either side a triangular plate, gnathos pointed, harpe with sacculus extended into a long arm beyond end of harpe, penis pestillate.

Early stages unknown.

Differs from the preceding genus in shape, in subcostal venation (SC^1 free, SC^2 perhaps longer-stalked), in the hindleg structure and (slightly) in the antenna. As regards the venation, in spite of its known variability in the subfamily, no one can study it in this and the three preceding genera without

noticing the constancy with which SC^1 anastomoses or is connected with C in them, but remains free in the present genus. We do not affirm that exceptions could not occur; we only say that, in examining a very large number of specimens, we have not found a single instance. The same general fixity of tendencies will be found helpful in connection with many other genera, even although it cannot be made of absolutely first-class importance.

Type of the genus : *Actenochroma muscicoloraria* (Walker) = *Hypochroma muscicoloraria*, Walker (1893).

Geographical distribution of species. — N. India.

1. *A. muscicoloraria* (Walker). N. India.

Hypochroma muscicoloraria, Walker, List Lep. Ins. Brit. Mus. Vol. 26, p. 1543 (1862).
Hypochroma sphagnata, Felder, Reise Novara, Lep. Het. t. 125, f. 2 (1875).
Actenochroma muscicoloraria, Warren, Proc. Zool. Soc. Lond. p. 350 (1893).
Herochroma muscicoloraria, Swinhoe, Trans. Ent. Soc. Lond. p. 172 (1894).
Pseudoterpna muscicoloraria, Hampson, Fauna Ind. Moths, Vol. 3, p. 479 (1895).

9. Genus ORTHOCRASPEDA, nov. gen., Prout

Orthocraspeda, nov. gen. Prout.

Characters. — Face sloping, slightly protuberant below, densely scaled. Palpus with first and second joints hairy beneath, second joint shortly rough-scaled above, third joint smooth scaled, in ♂ longish, in ♀ long. Tongue developed. Antenna moderate, in both sexes virtually simple. Pectus densely hairy. Femora nearly glabrous. Hindtibia in ♂ not dilated, in both sexes with all spurs developed. Abdomen broadly crested. Frenulum fully developed. Forewing broad, costa slightly arched, apex squared, termen slightly crenulate, anterior half almost vertical, posterior curved, becoming rather strongly oblique, cell about two-fifths, DC^2 incurved, DC^3 somewhat curved anteriorly, oblique posteriorly, SC^1 free, SC^2 stalked with $SC^{3,5}$, R^1 separate, R^2 from very little above middle of DC, M^1 separate; hindwing with apex rounded, termen rounded, slightly crenulate, tornus pronounced, inner margin rather long, cell short (scarcely over one-third) DC^2 curved, DC^3 arising somewhat further distally, somewhat curved, oblique, C quite shortly approximated to cell near base, rapidly diverging, SC^2 separate, M^1 separate.

Early stages unknown.

Distinguished from all its allies by the shape of the wings, also from most of them (so far as the ♀♀ are known) by the long terminal joint of palpus. The approximation of C of hindwing to the cell is almost as short as in the following genus, which, through its more aberrant species *nelearia*, is perhaps somewhat nearly associated with this, in spite of the difference of facies.

Type of the genus : *Orthocraspeda netunaria* (Guenée) = *Hypochroma netunaria*, Guenée.

Geographical distribution of species. — Malayan.

1. *O. netunaria* (Guenée). Natuna Islands to Philippines.

Hypochroma netunaria, Guenée, Spec. Gén. Lep. Vol. 9, p. 279 (1858).
Terpna crassistriga, Warren, Novit. Zool. Vol. 3, p. 301 (1896) (nov. syn.).
Actenochroma unicolor, Warren, ibidem, Vol. 6, p. 17 (1899) (nov. syn.).
Pseudoterpna crassistriga, Semper, Reisen Philipp. (2), Vol. 6, p. 637, t. 65, f. 10 (1902).

10. Genus EPIPRISTIS, Meyrick

Epipristis. Meyrick, Proc. Linn. Soc. N. S. Wales (2), Vol. 2, p. 916 (1888); Turner, ibidem, Vol. 35, p. 631 (1910).

Terpnidia. Warren, MS. (in coll. Brit. Mus.); Swinhoe, Trans. Ent. Soc. Lond. p. 171 (1894).

Characters.— Face smooth. Palpus moderate, second joint somewhat rough-scaled beneath, third joint smooth, moderate in ♂, longish in ♀. Tongue developed. Antenna moderate, in both sexes nearly simple, minutely ciliated. Pectus somewhat hairy (less densely than in the preceding genera). Femora nearly glabrous. Hindtibia in ♂ not dilated, in both sexes with all spurs. Abdomen smooth or slightly crested (*minimaria*), or somewhat more strongly crested (*nelearia*). Frenulum fully developed. Forewing with costa arched at base and slightly towards apex, termen gently waved, curved, oblique, cell less than one-half, DC^2 incurved, DC^3 arising distally to DC^2, somewhat curved and oblique, SC^1 from cell, anastomosing with C and usually also with SC^2 (sometimes free in *nelearia*). SC^{2-5} normal, R^1 separate, R^2 from above middle of DC, M^1 separate; hindwing with costa short, strongly arched in proximal part, apex rounded, termen convex, somewhat waved or subcrenulate, cell less than one-half, DC^2 curved, DC^3 arising distally, usually weak, C approximated to cell at a point or very shortly near base, than very strongly divergent, SC^2 separate, R^2 arising near R^1, M^1 separate. ♂ genitalia with uncus bifid, gnathos rounded, harpe with spined clasper, penis pestillate.

Early stages unknown.

Type of the genus : *Epipristis minimaria* (Guenée) = *Hypochroma minimaria*, Guenée = *Epipristis oxycyma*, Meyrick (1910).

Geographical distribution of species. — Indo-Australian.

1. *E. minimaria* (Guenée).
   a. *Epipristis minimaria minimaria.* — Ceylon, Assam to Borneo.
      Hypochroma minimaria, Guenée, Spec. Gén. Lep. Vol. 9, p. 279 (1858).
      Hypochroma parvula, Walker, List Lep. Ins. Brit. Mus. Vol. 21, p. 435 (1860).
      Acidalia truncataria, Walker, ibidem, Vol. 23, p. 774 (1861).
      Pingasa minimaria, Moore, Lep. Ceyl. Vol. 3, p. 420, t. 192, f. 2 (1887).
      Epipristis minimaria, Swinhoe, Trans. Ent. Soc. Lond. p. 171 (1894).
      Pseudoterpna minimaria, Hampson, Fauna Ind. Moths, Vol. 3, p. 479 (1895).
   b. *Epipristis minimaria oxycyma.* — Queensland.
      Epipristis oxycyma, Meyrick, Proc. Linn. Soc. N. S. Wales (2), Vol. 2, p. 916 (1888).
      Epipristis minimaria, Turner, ibidem, Vol. 35, p. 632 (1910).
2. *E. nelearia* (Guenée). — Tenasserim, Borneo, Java.
      Hypochroma nelearia, Guenée, Spec. Gén. Lép. Vol. 9, p. 279 (1858).
      Epipristis nelearia, Meyrick, Trans. Ent. Soc. Lond. p. 73 (1897).

11. Genus MIMANDRIA, Swinhoe

Mimandria (Warren, Novit. Zool. Vol. 2, p. 88, gen. cælebs). Swinhoe, Trans. Ent. Soc. Lond. p. 541 (1904).

Characters. — Face flat, short-scaled. Palpus moderate, second joint moderately rough-scaled, third joint densely scaled, moderate in ♂, slightly longer in ♀. Tongue wanting, or entirely vestigial 1).

1) We have not had any material for dissection, but if there be any traces of a tongue they are certainly so slight as to be non-functional, and of no generic importance.

Antenna short, in both sexes bipectinate, with apex merely serrate, the pectinations rather long in ♂, rather short in ♀. Pectus hairy. Hindtibia in ♂ not dilated, in both sexes with all spurs. Abdomen robust, crested. Frenulum fully developed. Forewing with costa somewhat arched, apex moderately acute, termen rounded, oblique, very faintly waved, cell somewhat less than one-half, DC^2 somewhat incurved, then oblique, SC^1 anastomosing or connected with C, SC^2 normal, usually anastomosing with SC^1, R^1 separate, R^2 from above middle of DC, M^1 separate; hindwing with apex rounded, termen faintly waved, tornus pronounced, inner margin long, cell somewhat less than one-half, DC^3 strongly incurved, C approximated to cell very shortly near base, then rapidly diverging, SC^2 separate, R^2 from near R^1, M^1 separate.

Early stages unknown.

Type of the genus : *Mimandria insularis*, Swinhoe (1904).

Geographical distribution of species. — Madagascar.

1. *M. insularis*, Swinhoe. Madagascar.

Mimandria insularis Warren, Novit. Vol. 2, p. 88, nom. nud. (Swinhoe, Trans. Ent. Soc. Lond. p. 541 (1904).

12. Genus PINGASA, Moore

Pingasa. Moore, Lep. Ceyl. Vol. 3, p. 419 (1887).
Pingasia. Moore, Lep. Coll. Atkinson, p. 247 (1888).
Skorpisthes. Lucas, Proc. Roy. Soc. Queensl. Vol. 15, p. 143 (1900).

Characters. — Face scarcely protuberant. Palpus in ♂ moderate, in ♀ long, second joint densely rough-scaled, third joint smooth, in ♂ moderate, in ♀ long, cylindrical, rather slender. Tongue developed. Antenna long, in ♂ bipectinate to two-thirds with rather short branches, in ♀ almost simple. Pectus densely hairy. Femora hairy. Hindtibia in ♂ dilated with hair pencil, in both sexes with all spurs. Abdomen with rather slight or moderate dorsal crests. Frenulum fully developed. Forewing with costa nearly straight, gently arched near apex, apex moderate or rather pronounced, termen oblique, scarcely convex, almost smooth or faintly subcrenulate, cell less than one-half (usually two-fifths), DC^2 incurved, or vertical anteriorly, becoming oblique posteriorly, DC^3 curved, not very oblique, SC^1 from cell, rather closely approximated to C and SC^2, but very generally free 1), SC^2 from stalk of SC^{3-5}, R^1 just separate, connate, or very shortly stalked, R^2 from considerably above middle of discocellulars, M^1 separate; hindwing with costa quite short, arched, apex rounded, termen rounded, weakly or moderately crenulate, rather long, tornus pronounced, inner margin long (in ♂ very long), tufts of raised scales on upper surface at extremity of cell and from middle of inner margin to beyond R^2, cell short (scarcely over one-third), DC^2 curved, strongly oblique, DC^3 arising distally thereto, little oblique, C parallel with SC for a very short distance near base, then very strongly diverging, SC^2 separate 2), R^2 from very near R^1, M^1 separate (Pl. 1, Fig. 10). ♂ genitalia with uncus bifurcate, gnathos terminating in two points, harpe emarginate at the apex, juxta a long scobinated arm, penis rounded (*ruginaria*; *tephrosiaria* has also been examined, and has much in common).

Early stages imperfectly known. Larva rather stout and firm, of somewhat the aspect of *Pseudoterpna*, apparently without the specialization of head and prothorax characteristic of the higher

1) We have examined a very large number of specimens, and can state that in not more than ten per cent is there even an osculation with either of the adjacent veins (a rather noteworthy contrast to the following genus).

2) Shortly stalked in our figured specimen of *angulifera*, Warren (Pl. 1, Fig. 3), probably only as an exceptional aberration.

Hemitheids. Pupa pale brown, speckled with blackish. Moore (*Lep. Ceyl.* Vol. 3, p. 419, t. 192, f. 1*b*) and Semper (*Schmett. Philipp.* Vol. 2, p. 637, t. U, f. 16, 17) give two tolerably different-looking larvæ (and pupæ) as *crenaria*, Guenée; that of Semper will doubtless be *chlora*, Cramer.

An extremely natural genus, with probably the single exception of *cinerea*, Warren, of which we have only seen one example, and that quite cursorily; the ♀ we only know from Turner's characterization, but her shorter terminal joint of palpus and the unique resting posture of the species (see Kershaw, *Vict. Nat.* Vol. 14, p. 104, tab.) suggest at least a possibility of wide biological divergence, and *Skorpisthes*, Lucas, may ultimately require to be separated generically. As is often the case with large and homogeneous groups, the delimitation of the various species is a matter of difficulty, and probably some of the forms which we here record as species should fall as subspecies or synonyms; some we have not even seen, while others have only been examined from the standpoint of their generic status, the specific being left for another occasion.

Type of the genus : *Pingasa ruginaria* (Guenée) = *Hypochroma ruginaria*, Guenée.

Geographical distribution of species. — Indo-Australian and African.

SECTION I. — ♀ palpus with third joint considerably longer than second (*Pingasa*, Moore).

1. *P. ruginaria* (Guenée). — W. Africa to Formosa.

Hypochroma ruginaria, Guenée, Spec. Gén. Lép. Vol. 9, p. 278 (1858).
Hypochroma commutata, Walker, List Lep. Ins. Brit. Mus. Vol. 21, p. 429 (1860).
Hypochroma communicans, Walker, ibidem, p. 430 (1860).
Hypochroma perfectaria, Walker, ibidem, p. 434 (1860).
Hypochroma nyctemerata, Walker, ibidem, p. 444 (1860).
Hypochroma grandidieri, Butler, Cist. Ent. Vol. 2, p. 394 (1879) (var.?).
Pingasa ruginaria, Moore, Lep. Ceyl. Vol. 3, p. 419 (1887).
Pingasa decrustata, Warren, Novit. Zool. Vol. 9, p. 492 (1902) (fide Swinhoe, Trans. Ent. Soc. Lond. 1904, p. 540).

2. *P. chlora* (Stoll). — Malaysia, New Guinea, Australia; ? India.

[*Phalaena Geometra*] *chlora*, Stoll, in Cramer, Pap. Exot. Vol. 4, p. 233, t. 398, f. C (1782) [*Phalaena Pyralis*, ex err., ibidem, p. 248].
Pseudoterpna ecchloraria, Hübner, Verz. bek. Schmett, p. 285 (1826?).
Phalaena chlora, Verloren, Cat. Ins. Lep. Crameri, p. 268 (1837).
Terpna chlora, Herrich-Schaffer, Samml. Aussereur. Schmett. Vol. 1, p. 37 (1856).
Hypochroma chlorata, Guenée, Spec. Gén. Lép. Vol. 9, p. 277 (1858).
? *Hypochroma crenaria*, Guenée, ibidem, p. 278 (1858).
Hypochroma chlora, Walker, List Lep. Ins. Brit. Mus. Vol. 21, p. 437 (1860).
? *Boarmia leucostigmaria*, Nietner, Observ. Enem. Coffee-tree, p. 23 (1861)
Hypochroma sublimbata, Butler, Ann. Mag. Nat. Hist. (5), Vol. 10, p. 232 (1882).
Hypochroma paulinaria, Pagenstecher, Jahrb. Nassau. Ver. Naturk. Vol. 38, p. 47, t. 1, f. 1 (1885).
? *Pingasa crenaria*, Moore, Lep. Ceyl. Vol. 3, p. 419, t. 102, f. 1, 1*b* (1887).
? *Pingasa leucostigmaria*, Moore, ibidem, p. 420 (1887).
Pingasa candidaria, Warren, Novit. Zool. Vol. 1, p. 382 (1894) (var.?).
Pseudoterpna chlora, Swinhoe, Trans. Ent. Soc. Lond. p. 170 (1894).
? *Pseudoterpna crenaria*, Semper, Reisen Philipp. (2), Vol. 6, p. 637 (1902).

3. *P. lariaria* (Walker) (prec. form. ?). — N. India to Borneo, New Guinea.

Hypochroma lariaria, Walker, List Lep. Ins. Brit. Mus. Vol. 21, p. 433 (1861).
Hypochroma irroratata, Moore, Proc. Zool. Soc. Lond. p. 632 (1867).
Pingasa irroratata, Cotes & Swinhoe, Cat. Moths Ind. (4), p. 506 (1888).

4. *P. pseudoterpnaria* (Guenée). — China, Corea, Japan.

Hypochroma pseudoterpnaria, Guenée, Spec. Gen. Lép. Vol. 9, p. 276 (1858).
Hypochroma pryeri, Butler, Ann. Mag. Nat. Hist. (5), Vol. 1, p. 398 (1878); Ill. Het. Coll. Brit. Mus. Vol. 3, p. 35, t. 40, f. 9 (1879).
Pseudoterpna pseudoterpnaria, Leech, Ann. Mag. Nat. Hist. (6), Vol. 20, p. 228 (1897).

5. *P. tephrosiaria* (Guenée) (præc. var. ?). — N. India.
   Hypochroma tephrosiaria, Guenée, Spec. Gen. Lep. Vol. 9, p. 277 (1858).
   Hypochroma pseudoterpnaria, Cotes & Swinhoe, Cat. Moths Ind. (4), p. 508 (1888) (nec Guenee).
   Pseudoterpna tephrosiaria, Hampson, Fauna Ind. Moths, Vol. 3, p. 473 (1895).
6. *P. abyssiniaria* (Guenée). — Abyssinia.
   Hypochroma abyssiniaria, Guenée, Spec. Gen. Lép. Vol. 9, p. 277 (1858).
7. *P. rhadamaria* (Guenée). — Madagascar, E. Africa.
   Hypochroma rhadamaria, Guenée, Spec. Gén. Lép. Vol. 9, p. 277 (1858).
   Hypochroma alterata, Walker, List Lep. Ins. Brit. Mus. Vol. 21, p. 428 (1860).
   Pingasa interrupta, Warren, Novit. Zool. Vol. 8, p. 204 (1901).
   Pseudoterpna rhadamaria, Swinhoe, Trans. Ent. Soc. Lond. p. 540 (1904).
8. *P. respondens* (Walker). — S. Africa.
   Hypochroma respondens, Walker, List Lep. Ins. Brit. Mus. Vol. 21, p. 428 (1860).
   Hypochroma (?) distensaria, Walker, ibidem, p. 444 (1860).
9. *P. attenuans* (Walker). — Sierra Leone.
   Hypochroma attenuans, Walker, List Lep. Ins. Brit. Mus. Vol. 31, p. 430 (1866).
   Pseudoterpna attenuans, Swinhoe, Trans. Ent. Soc. Lond. p. 540 (1904).
10. *P. distenta* (Walker). — India.
    Hypochroma distenta, Walker, List Lep. Ins. Brit. Mus. Vol. 21, p. 434 (1860).
11. *P. dispensata* (Walker). — India to Celebes.
    Hypochroma crenaria, var. A., Guenee, Spec. Gén. Lép. Vol. 9, p. 278 (1858).
    Hypochroma dispensata, Walker, List Lep. Ins. Brit. Mus. Vol. 21, p. 435 (1860).
    Hypochroma celata, Walker, ibidem, Vol. 35, p. 1593 (1866).
    Pseudoterpna dispensata, Hampson, Fauna Ind. Moths, Vol. 3, p. 473 (1895).
12. *P. hypoleucaria* (Guenée). — Réunion.
    Hypochroma hypoleucaria, Guenée, Maillard's La Réunion, Annexe G, p. 31 (1862).
13. *P. eugrapharia* (Mabille). — Madagascar.
    Hypochroma eugrapharia, Mabille, Ann. Soc. Ent. Fr. (5), Vol. 9, p. 347 (1879).
14. *P. batiaria* (Plötz) (huj. gen.?). — W. Africa.
    Hypochroma batiaria, Plotz, Stett. Ent. Zeit. Vol. 41, p. 302 (1880).
15. *P. lahayei* (Oberthür). — N. Africa.
    Hypochroma lahayei, Oberthur, Bull. Soc. Ent. Fr. p. 59 (1887); Etud. Ent. Fasc. 12, p. 31, t. 7, f. 59 (1888).
    Pseudoterpna lahayei, Staudinger, Cat. ed. 3), p. 261 (1901).
16. *P. rufofasciata*, Moore. — India to Ceram.
    Pingasia rufofasciata, Moore, Lep. Coll. Atkinson, p. 247 (1888).
    Pingasa rufofasciata, Cotes & Swinhoe, Cat. Moths Ind. (4), p. 507 (1888).
17. *P. rubicunda*, Warren (præc. var.?). — Assam.
    Pingasa rubicunda, Warren, Novit. Zool. Vol. 1, p. 383 (1894).
    Pseudoterpna rubicunda Swinhoe, Lep. Het. Oxford Mus. Vol. 2, p. 382 (1900).
18. *P. recognita* (Saalmüller) (huj. gen.?). — Madagascar.
    Hypochroma recognita, Saalmuller, Lep. Madag. (2), p. 404, t. 14, f. 260, 260a (1891).
19. *P. alba*, Swinhoe. — Khásis, E. China, Japan.
    Pingasa alba, Swinhoe, Trans. Ent. Soc. Lond. p. 401, t. 19, f. 6 (1891).
    Pseudoterpna alba, Swinhoe, ibidem, p. 171 (1894).
    Pingasa gracilis, Warren, MS. in coll. Brit. Mus.).
20. *P. signifrontaria* (Mabille). — Comoro Islands.
    Hypochroma signifrontaria, Mabille, Ann. Soc. Ent. Belg. Vol. 37, p. 65 (1893).
21. *P. javensis*, Warren. — Java.
    Pingasa javensis, Warren, Novit. Zool. Vol. 1, p. 383 (1894).
22. *P. latifascia*, Warren. — Bachian.
    Pingasa latifascia, Warren, Novit. Zool. Vol. 1, p. 383 (1894).
23. *P. subdentata*, Warren. — S. Celebes.
    Pingasa subdentata, Warren, Novit. Zool. Vol. 1, p. 383 (1894).

24. *P. venusta*, Warren. — Sikkim, New Guinea.
Pingasa venusta, Warren, Novit. Zool. Vol. 1, p. 384 (1894).
Pseudoterpna venusta, Hampson, Fauna Ind. Moths, Vol. 3, p. 474 (1895).

25. *P. angulifera*, Warren. — Pl. 1, Fig. 3. — Fergusson Isl., New Guinea.
Pingasa angulifera, Warren, Novit. Zool. Vol. 3, p. 283 (1896).

26. *P. subviridis*, Warren. — Assam.
Pingasa subviridis, Warren, Novit. Zool. Vol. 3, p. 308 (1896).
Pseudoterpna subviridis, Hampson, Journ. Bombay Nat. Hist. Soc. Vol. 12, p. 88 (1898).

27. *P. subpurpurea*, Warren. — N. Borneo.
Pingasa subpurpurea, Warren, Novit. Zool. Vol. 4, p. 31 (1897).

28. *P. atriscripta*, Warren. — Goodenough Isl., Queensland.
Pingasa atriscripta, Warren, Novit. Zool. Vol. 6, p. 19 (1899).
Hypochroma munita, Lucas, Proc. Roy. Soc. Queensl. Vol. 16, p. 78 (1901) (nov. syn.).

29. *P. blanda* (Pagenstecher). — Bismarck Archipelago.
Pseudoterpna blanda, Pagenstecher, Zoologica, Vol. 29, p. 151 (1900).

30. *P. acutangula*, Warren. — New Guinea.
Pingasa acutangula, Warren, Novit. Zool. Vol. 10, p. 352 (1903).

31. *P. rufilunata*, Warren. — British New Guinea.
Pingasa rufilunata, Warren, Novit. Zool. Vol. 10, p. 352 1903

32. *P. meeki*, Warren. — British New Guinea.
Pingasa meeki, Warren, Novit. Zool. Vol. 14, p. 125 1907).

Section II. — ♀ palpus with third joint shorter than second (*Skorpisthes*, Lucas).

33. *P. cinerea*, Warren. — S. E. to E. Australia.
Pingasa cinerea, Warren, Novit. Zool. Vol. 1, p. 382 (1894).
Pseudoterpna singularis, Kershaw, The Victorian Natur. Vol. 14, p. 104, tab. (1897).
Skorpisthes unda-scripta, Lucas, Proc. Roy. Soc. Queensl. Vol. 15, p. 143 (1900).

13. Genus HYPODOXA, nov. gen., Prout

Hypodoxa, nov. gen. Prout.

Characters. — Face scarcely or little prominent, densely scaled. Palpus moderate to long, first and second joints long-haired beneath, third joint smooth-scaled, moderate to long, usually less extreme than in ♀ *Pingasa*. Tongue developed. Antenna over one-half length of forewing, in ♂ bipectinate with moderate or rather long branches (typically longer than in *Pingasa*), apical part simple, in ♀ nearly simple. Pectus densely hairy. Femora more or less hairy. Hindtibia in ♂ dilated with hair-pencil 1), in both sexes with all spurs. Metathorax not or scarcely crested. Abdomen with small or moderate paired crests. Frenulum fully developed. Forewing with costa slightly arched at base and near apex, otherwise almost straight, apex moderate, termen bowed, oblique, subcrenulate, upper surface with a ridge of raised scales near base, cell almost one-half, DC^2 slightly incurved, DC^3 moderately oblique, SC^1 from cell, anastomosing or connected with C, SC^2 stalked, anastomosing at a point or longer with SC^1, R^1 connate or separate, R^2 from somewhat above middle of DC, M^1 well separate; hindwing with costa rather short or moderate, apex somewhat rounded, termen crenulate, inner margin rather long, upper surface with tufts of raised scales (usually strong) in cell, at about one-third of wing (therefore well removed from DC, at least posteriorly), also at near middle of inner margin, cell not much less than one-half. DC^{2-3} rather variable, usually slightly or more decidedly approaching the

1) Not dilated in *crebusata*.

Pingasa-form. C shortly approximated to cell near base, SC^2 separate, R^2 characteristic, M^1 well separate. ♂ genitalia with uncus bifid, gnathos rounded, terminating in a long blunt arm, harpe with scobinated clasper, vinculum lobed, penis pestillate.

Early stages scarcely known. Larva of *muscosaria* red, lichen-like, found on fences (Lucas, *Vict. Nat.* Vol. 5, p. 25).

Related to the preceding genus, and likewise forming a fairly natural group, though not quite so strictly consistent in all details. Distinguished by the less short cells, less elongate hindwing (especially of the ♂), with less shortened costa, the constant anastomosis or connection of SC^1 of the forewing with C and SC^2, presence of raised scales on fore- as well as hindwing, and several slight characters in venation, palpi, antennæ, etc.

Type of the genus : *Hypodoxa emiliaria* (Guenée) = *Hypochroma emiliaria*, Guenée.

Geographical distribution of species. — Australia to New Guinea and Solomon Islands.

1. *H. emiliaria* (Guenée). — N. and E. Australia, New Guinea.
   Hypochroma emiliaria, (Doubleday, MS.) Guenée, Spec. Gén. Lép. Vol. 9, p. 280 (1858).
   Hypochroma aurantiacea, Lucas, Proc. Linn. Soc. N. S. Wales (2), Vol. 6, p. 297 (1891).
   Hypochroma subornata, Warren, Novit. Zool. Vol. 3, p. 360 (1896).
   Hypochroma purpurifera, Warren, ibidem, Vol. 6, p. 18 (1899) (nov. syn.).
   Hypochroma purpurissata, Lucas, Proc. Roy. Soc. Queensl. Vol. 16, p. 77 (1901).
   Hypochroma assidens, Lucas, ibidem, p. 79 (1901).
   Terpna emiliaria, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 35, p. 630 (1910).
2. *H. multicolor* (Warren) (præc. var. vel. syn. ?). — St. Aignan.
   Hypochroma multicolor, Warren, Novit. Zool. Vol. 6, p. 17 (1899) [1].
3. *H. viridicoma* (Warren).
   a. *Hypodoxa viridicoma viridicoma*. — Tugela (Solomons).
   Hypochroma viridicoma, Warren, Novit. Zool. Vol. 6, p. 18 (1899).
   b. *Hypodoxa viridicoma interrupta*. — Florida (Solomons).
   Hypochroma viridicoma interrupta, Warren, Novit. Zool. Vol. 9, p. 353 (1902).
4. *H. basinigra* (Warren). — British New Guinea.
   Hypochroma basinigra, Warren, Novit. Zool. Vol. 9, p. 352 (1902).
5. *H. corrosa* (Warren). — British and Dutch New Guinea.
   Hypochroma corrosa, Warren, Novit. Zool. Vol. 14, p. 123 (1907).
6. *H. leprosa* (Warren). — British and Dutch New Guinea.
   Hypochroma leprosa, Warren, Novit. Zool. Vol. 14, p. 124 (1907).
7. *H. lichenosa* (Warren). — British New Guinea.
   Hypochroma lichenosa, Warren, Novit. Zool. Vol. 14, p. 124 (1907).
8. *H. muscosaria* (Guenée). — S. E. and E. Australia.
   Hypochroma muscosaria, Guenée, Spec. Gen. Lép. Vol. 9, p. 281, t. 6, f. 3 (1858).
   Hypochroma emiliaria, Walker, List Lep. Ins. Brit. Mus. Vol. 21, p. 441 (1860) (nec Guenée).
   Hypochroma (?) *cetraria*, Felder, Reise Novara, Lep. Het. t. 125, f. 7, 7a (1875).
   Hypochroma squamata, Felder, ibidem, t. 126, f. 14 (1875).
   Pseudoterpna muscosaria, Swinhoe, Lep. Het. Oxford Mus. Vol. 2, p. 385 (1900).
   Terpna muscosaria, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 35, p. 637 (1910).
9. *H. deteriorata* (Walker). — New South Wales.
   Hypochroma deteriorata, Walker, List Lep. Ins. Brit. Mus. Vol. 21, p. 441 (1860).

1) *Pingasa multicolora* on type label. It is not unlikely that not only this, but some at least of the following five species will prove to be forms of the very variable *emiliaria*.

Hypochroma (?) *horridata*, Walker, ibidem, Vol. 26, p. 1544 (1862) (ab.).
Boarmia (*Ectropis*) *nigraria*, Felder, Reise Novara, Lep. Het. t. 126, f. 1 (1875).
Pseudoterpna horridata, Swinhoe, Lep. Het. Oxford Mus. Vol. 2, p. 385, t. 6, f. 3 (1900).
Pseudoterpna deteriorata, Swinhoe, Trans. Ent. Soc. Lond. p. 668 (1902).
Terpna deteriorata, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 35, p. 640 (1910).

10. *H. erebusata* (Walker). Queensland.
Hypochroma erebusata, Walker, List Lep. Ins. Brit. Mus. Vol. 21, p. 443 (1860).
Hypochroma erebata, Meyrick, Proc. Linn. Soc. N. S. Wales (2), Vol. 2, p. 914 (1888).
Pseudoterpna erebusata, Swinhoe, Lep. Het. Oxford Mus. Vol. 2, p. 385 (1900).
Terpna erebata, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 35, p. 638 (1910).

11. *H. myriosticta* (Turner) (huj. gen.?). Queensland.
Pseudoterpna myriosticta, Turner, Trans. Roy. Soc. S. Austral. Vol. 28, p. 223 (1904).
Terpna myriosticta, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 35, p. 638 (1910).

14. Genus ÆOLOCHROMA, nov. gen., Prout

Æolochroma, nov. gen. Prout.

Characters. — Face slightly or scarcely protuberant, densely scaled. Palpus in both sexes moderate, first joined long-haired beneath, second joint stout, shortly dense-scaled, or long-scaled almost like first joint, third joint smooth, moderate or rather short. Tongue developed. Antenna rather long, in ♂ bipectinate to or to beyond one-half, or nearly simple, with tufts of cilia, in ♀ minutely ciliated. Pectus densely hairy. Femora nearly glabrous, or hindfemur somewhat hairy. Hindtibia in ♂ not dilated, in both sexes with all spurs. Metathorax not or only very slightly crested. Abdomen with moderate or (more usually) strong dorsal crests. Frenulum fully developed. Forewing with costa straight to near apex, then gently arched, apex moderate, termen bowed, oblique, weakly subcrenulate, cell almost one-half, DC^2 incurved or mangled (except in *unitaria* and *subrubella*; sometimes only weakly in one or two others of Section II), DC^3 vertical anteriorly, slightly curved posteriorly, SC^1 from cell, free, usually well away from both C and SC^2 1). SC^{2-5} normal, R^1 separate, M^1 separate; hindwing with costa rather short, apex rounded, termen rounded, weakly subcrenulate, tornus moderately pronounced, inner margin rather long, cell less than one-half, DC^2 curved, DC^3 nearly always arising further (sometimes much further) distally, more or less curved, C approximated to cell to less than one-half, then rapidly diverging, SC^2 separate, R^2 characteristic, M^1 separate (Pl. 1, Fig. 8). ♂ genitalia with uncus tapered, gnathos weak or atrophied, harpe fused, penis pestillate 2).

Early stages unknown.

This genus seems quite sufficiently distinct from *Terpna* in the scarcely protuberant frons, less hairy femora, etc.; the shape and facies are tolerably distinctive, but inasmuch as *Terpna*, as at present constituted, presents great diversity in the latter respects this must not be over-emphasized.

Type of the genus : *Æolochroma turneri* (Lucas) = *Hypochroma turneri*, Lucas.

Geographical distribution of species. — Australia, New Guinea, Mysol.

1) Turner (*Proc. Linn. Soc. N. S. Wales*, Vol. 35, p. 634) notes a specimen of *turneri* in which SC^1 anastomoses with SC^2, and we have observed the same in one of *languida*; but such an occurrence is evidently quite exceptional.
2) *Æ. turneri*, *prasina* and *suffusa* examined, which show sufficient specific differences.

Section I. — ♂ antenna not bipectinate.

1. *Æ. turneri* (Lucas). — Queensland.
   Hypochroma turneri, Lucas, Proc. Linn. Soc. N. S. Wales (2), Vol. 4, p. 1096 (1890).
   Actenochroma turneri, Turner, ibidem, Vol. 35, p. 633 (1910).
2. *Æ. prasina* (Warren). — Fergusson Isl., British and Dutch New Guinea.
   Actenochroma (?) *prasina*, Warren, Novit. Zool. Vol. 3, p. 282 (1896).
   Actenochroma discolor, Warren, ibidem, p. 359 (1896).
   Actenochroma prasina, Swinhoe, Trans. Ent. Soc. Lond. p. 669 (1902).
3. *Æ. suffusa* (Warren). — Pl. 1, Fig. 4, 4a. — Fergusson Isl., British and Dutch New Guinea.
   Actenochroma ? *prasina* ab. *suffusa*, Warren, Novit. Zool. Vol. 3, p. 283 (1896).
4. *Æ. albifusaria* (Walker). — Mysol.
   Boarmia albifusaria, Walker, List Lep. Ins. Brit. Mus. Vol. 35, p. 1589 (1866).
5. *Æ. modesta* (Warren) (huj. sect.?). — British New Guinea.
   Hypochroma modesta, Warren, Novit. Zool. Vol. 10, p. 350 (1903).
6. *Æ. amethystina* (Warren). — British New Guinea.
   Actenochroma amethystina, Warren, Novit. Zool. Vol. 14, p. 123 (1907).

Section II. — ♂ antenna bipectinate.

7. *Æ. hypochromaria* (Guenée). — N. to S. E. Australia.
   Cleora (?) *hypochromaria*, Guenée, Spec. Gén. Lep. Vol. 9, p. 234 (1858).
   Hypochroma hypochromaria, Meyrick, Proc. Linn. Soc. N. S. Wales (2), Vol. 2, p. 909 (1888).
   Pseudoterpna bryophanes, Turner, Trans. Roy. Soc. S. Austral. Vol. 28, p. 222 (1904).
   Terpna hypochromaria, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 35, p. 641 (1910).
8. *Æ. unitaria* (Walker) (huj. gen.?). — E. and S. E. Australia.
   Tephrosia unitaria, Walker, List Lep. Ins. Brit. Mus. Vol. 21, p. 417 (1860).
   Hypochroma acanthina, Meyrick, Proc. Linn. Soc. N. S. Wales (2), Vol. 2, p. 910 (1888).
   Terpna acanthina, Turner, ibidem, Vol. 35, p. 641 (1910).
9. *Æ. metarhodata* (Walker). — S. E. Australia.
   Scotosia metarhodata, Walker, List Lep. Ins. Brit. Mus. Vol. 20, p. 1724 (1862).
   Hypochroma metarhodata, Meyrick, Proc. Linn. Soc. N. S. Wales (2), Vol. 2, p. 908 (1888).
   Terpna metarhodata, Turner, ibidem, Vol. 35, p. 640 (1910).
10. *Æ. saturataria* (Walker). — Mysol, New Guinea, N. and W. Australia.
    Hypochroma saturataria, Walker, List Lep. Ins. Brit. Mus. Vol. 35, p. 1593 (1866).
    Hypochroma pertulata, Warren, Novit. Zool. Vol. 6, p. 326 (1899).
    Pseudoterpna saturataria, Swinhoe, Lep. Het. Oxford Mus. Vol. 2, p. 384, t. 5, f. 6 (1900).
    Hypochroma saturataria ab. *perviridata*, Warren, Novit. Zool. Vol. 10, p. 351 (1903) (ab.).
11. *Æ. viridicata* (Lucas) (huj. gen.?). — Queensland.
    Hypochroma viridicata, Lucas, Proc. Linn. Soc. N. S. Wales (2), Vol. 4, p. 1094 (1890).
    Terpna viridicata, Turner, ibidem, Vol. 35, p. 641 (1910).
12. *Æ. quadrilinea* (Lucas). — Queensland.
    Hypochroma quadrilinea[1], Lucas, Proc. Roy. Soc. Queensl. Vol. 8, p. 80 (1892).
    Actenochroma ochrea, Warren, Novit. Zool. Vol. 3, p. 360 (1896).
    Hypochroma ochrea, Warren, ibidem, Vol. 4, p. 207 (1897).
    Pseudoterpna quadrilinea, Swinhoe, Trans. Ent. Soc. Lond. p. 669 (1902).
    Terpna quadrilinea, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 35, p. 642 (1910).

1) *Hypochroma quadripartita* on type label.

13. *Æ. subrubescens* (Warren). Queensland.
Hypochroma subrubescens, Warren, Novit. Zool. Vol. 3, p. 101 (1896).
Terpna subrubescens, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 35, p. 642 (1910).

14. *Æ. caesia* (Warren). Ron to Fergusson Isl.
Actenochroma (?) *caesia*, Warren, Novit. Zool. Vol. 3, p. 282 (1896).
Hypochroma caesia, Warren, ibidem, Vol. 13, p. 77 (1906).

15. *Æ. languida* (Warren). British New Guinea.
Actenochroma languida, Warren, Novit. Zool. Vol. 5, p. 232 (1898).

16. *Æ. subrubella* (Warren) (huj. gen. ?). British New Guinea.
Hypochroma subrubella, Warren, Novit. Zool. Vol. 10, p. 351 (1903).

17. *Æ. purpurissa* (Warren). British New Guinea.
Hypochroma purpurissa, Warren, Novit. Zool. Vol. 13, p. 77, t. 10, f. 14 (1906).

18. *Æ. rufivaria* (Warren). British New Guinea.
Hypochroma rufivaria, Warren, Novit. Zool. Vol. 14, p. 125 (1907).

15. Genus METALLOLOPHIA, Warren

Metallolophia. Warren, Novit. Zool. Vol. 2, p. 88 (1895).

Characters. — Face scarcely protuberant, densely but smoothly scaled. Palpus moderate, second joint rather long-scaled beneath, third joint in ♂ short, blunt, in ♀ moderate or longish. Tongue developed. Antenna rather long; in ♂ lamellate, the lamellæ sometimes with slight lateral prolongation, in ♀ almost simple. Pectus densely hairy. Femora apparently nearly glabrous in type species, moderately hairy in some cases. Hindtibia in ♂ not dilated, in both sexes with all spurs present. Metathorax not appreciably crested. Abdomen with minute pair of crests on second segment, stronger crests on third and fourth, all metallic-coloured in type species. Frenulum fully developed. Forewing with costa rather straight, apex moderate or pronounced, termen somewhat crenulate, strongly oblique (especially in the ♂ of type species), cell nearly one-half, discocellulars forming a continuous curve, not appreciably angled at R^2, SC^1 free, SC^2 normal. R^1 separate, R^2 from slightly above middle of DC, M^1 separate; hindwing with apex rounded, termen convex, somewhat crenulate in type species, inner margin long (very long in type species), cell at least two-fifths, discocellars rather variable, either separately or continuously curved, DC^2 never so oblique as in typical *Æolochroma*, C approximated to cell to less than one-half, then very strongly divergent, SC^2 separate, M^1 separate.

Early stages unknown.

This small group of evident allies presents no very salient structural features, so far as has yet been discovered, and might possibly be united with the preceding genus as another section thereof. In some respects it seems intermediate between that genus and *Terpna*. Unfortunately we have only had access to very meagre material, and largely in inferior condition. The metallic crests are not of generic value, being apparently absent in all but the type species, while on the other hand they are shown in one species of *Æolochroma* (*subrubella*). The narrower forewing and longer inner-margin of hindwing give to the ♂ of the type species a distinctive shape, but the difference of shape is less marked in the rest, though the inner margin of hindwing seems always relatively longer than in *Æolochroma*.

Type of the genus : *Metallolophia vitticosta* (Walker) = *Hypochroma vitticosta*, Walker (1895).

Geographical distribution of species. — N. India and China to Borneo.

1. *M. vitticosta* (Walker). Borneo, Singapore.
Hypochroma vitticosta, Walker, List Lep. Ins. Brit. Mus. Vol. 21, p. 438 (1860).
Metallolophia vitticosta, Warren, Novit. Zool. Vol. 2, p. 88 (1895).

2. *M. opalina* (Warren). N. India; ? China.
Terpna opalina, Warren, Proc. Zool. Soc. Lond. p. 349, t. 32, f. 14 (1893).
Pseudoterpna opalina, Hampson, Fauna Ind. Moths, Vol. 3, p. 475 (1895).
3. *M. ocellata* (Warren). Khâsis.
Terpna (?) *ocellata*, Warren, Novit. Zool. Vol. 4, p. 207, t. 5, p. 25 (1897).
Pseudoterpna ocellata, Hampson, Journ. Bombay Nat. Hist. Soc. Vol. 14, p. 654 (1903).
4. *M. subradiata* (Warren). Penang, Borneo.
Terpna subradiata, Warren, Novit. Zool. Vol. 4, p. 388 (1897).
5. *M. arenaria* (Leech). E. China.
Pachyodes arenaria, Leech, Trans. Ent. Soc. Lond. p. 144, t. 9, f. 12 (1889).
Pseudoterpna arenaria, Leech, Ann. Mag. Nat. Hist. (6), Vol. 20, p. 229 (1897).

16. Genus TERPNA, Herrich-Schäffer

Terpna. Herrich-Schäffer, Samml. Aussereur. Schmett. Vol. 1 (Lief. 5-12 [1854] indescr.), p. 26, 37 (1856).
Hypochroma (part.). Guenée, Spec. Gén. Lép. Vol. 9, p. 275 (1858) (nec Herrich-Schäffer, 1856).
Pachyodes. Guenée, ibidem, p. 282 (1858).
Pseudoterpna. Meyrick, Trans. Ent. Soc. Lond. p. 496 (1889) (nec Hübner).
Absala. Swinhoe, Ann. Mag. Nat. Hist. (6), Vol. 12, p. 149 (1893).
Archæopseustes Warren, Novit. Zool. Vol. 1, p. 380 (1894).
Calleremites. Warren, ibidem, p. 384 (1894).
Psilotagma. Warren, ibidem, p. 678 (1894).

Characters. Build robust. Frons strongly protuberant (except in *pictaria* and *neonoma*), densely scaled, but not tufted 1). Palpus moderate, second joint densely rough-scaled, third joint moderate to rather short, smoother scaled. Tongue developed, antenna somewhat variable in length, in ♂ usually bipectinate, with moderate to short branches, in ♀ usually nearly simple or weakly subserrate, rarely (*luteipes*, *superans* and *neonoma*) shortly bipectinate. Pectus and femora densely hairy. Hindtibia with all spurs, in ♂ often with slight, but rarely (*decorata*, *apicalis*) with strong hair-pencil. Metathorax sometimes crested, but never with the highly-developed crest of *Dindica*. Abdomen with well-developed mediodorsal crests (small in *haemataria* and *ornataria*); ♀ abdomen typically very robust. Frenulum fully developed. Forewing usually broad, costa gently arched, apex moderate, termen somewhat curved, more or less oblique, usually more or less subcrenulate, cell nearly always less than one-half, DC incurved. SC^1 from cell, free 2). SC^2 stalked with SC^{3-5}, R^1 not stalked, M^1 not stalked; hindwing with apex rounded, termen waved or crenulate, sometimes rather irregular, tornal area sometimes produced, inner margin always long, cell usually short (one-third to two-fifths), DC usually with a trace of angulation at R^2, but never of the extreme form of *Pingasa*, *Æolochroma*, etc., C shortly approximated to cell in its second fourth, rapidly diverging, SC^2 nearly always separate (very shortly stalked in *subornata*, and in the only known specimen of *differens*), R^2 from somewhat above middle of cell, M^1 separate. ♂ genitalia with uncus bifurcate, gnathos pointed, with small scobinations, harpe emarginate at the apex, penis shuttle-shaped, pestillate, ædœagus scobinated at the tip (*vigens*).

Early stages scarcely known.

1) Slightly tufted in *percomptaria* which is probably *sui generis*.
2) It is very remarkable that, notwithstanding the structural diversity within this genus, we have found absolutely no exception to this saving the unique type of *caliaur ps* and a single example of *ornataria*, and in the latter SC^1 anastomes shortly on *one wing only* — an obvious sport.

The moths which we include here should be divisible into at least two or three genera, but as we have not been able to find sharp lines of demarcation we have left them together. By subdividing the genus into subgenera, we have drawn attention to the variability of certain characters, which may be correlated with some real biological divergence.

Type of the genus : *Terpna haemataria*, Herrich-Schäffer (1856).

Geographical distribution of species. — Indo-Australian.

A. — ♂ *antenna simple; wing-margins non-crenulate.*

SUBGENUS I. — Cells very short; hindwing with SC^2 stalked (*Calleremites*, Warren).

1. *T. subornata* (Warren). Sikkim.
   Calleremites subornata, Warren, Novit. Zool. Vol. 1, p. 385 (1894).

SUBGENUS II. — Cells almost one-half; hindwing with SC^2 separate (*Psilotagma*, Warren).

2. *T. decorata* (Warren). Bhutan to W. China.
   Psilotagma decorata Warren, Novit. Zool. Vol. 1, p. 678 (1894).
   Terpna dorsocristata, Poujade, Ann. Soc. Ent. Fr. Vol. 64, p. 313, t. 7, f. 18, 18*a* (1895) (nov. syn.).
   Pseudoterpna dorsocristata, Leech, Ann. Mag. Nat. Hist. (6), Vol. 20, p. 229 (1897).

B. — ♂ *antenna with extremely short pectinations.*

SUBGENUS III. — Wing-margins more or less crenulate; cells rather short (*Absala*, Swinhoe).

3. *T. dorcada* (Swinhoe). N. India.
   Absala dorcada, Swinhoe, Ann. Mag. Nat. Hist. (6), Vol. 12, p. 149 (1893).
   Pseudoterpna dorcada, Hampson, Fauna Ind. Moths, Vol 3, p. 478 (1895).
4. *T. pictaria* (Moore). N. India.
   Pachyodes pictaria, Moore, Lep. Coll. Atkinson, p. 248 (1888).
   Pseudoterpna pictaria, Hampson, Fauna Ind. Moths, Vol. 3, p. 478 (1895).

C. — ♂ *antenna with rather short or moderate pectinations.*

SUBGENUS IV. — Wing-margins scarcely crenulate, that of hindwing not well rounded; cells very short; antenna about one-half, in ♀ not pectinate; abdominal crests small to moderate, metathorax not crested; underside of wings spotted (*Terpna*, Herrich-Schäffer — *Pachyodes*, Guenée).

5. *T. haemataria*, Herrich-Schäffer. N. India.
   Terpna haemataria, Herrich-Schäffer, Samml. Aussereur. Schmett. Vol. 1, t. [41], f. 205, 206 (1854); p. 37. 80 (1856).
   Pachyodes almaria, Guenée, Spec. Gén. Lép. Vol. 9, p. 282 (1858).
   Pachyodes hoemataria, Walker, List Lep. Ins. Brit. Mus. Vol. 21, p. 445 (1860).
   Pseudoterpna haemataria, Hampson, Fauna Ind. Moths, Vol. 3, p. 476 (1895).
6. *T. ornataria* (Moore). N. India.
   Pachyodes ornataria, Moore, Lep. Coll. Atkinson, p. 249 (1888).
   Pseudoterpna ornataria, Hampson, Fauna Ind. Moths, Vol. 3, p. 476 (1895).
7. *T. amplificata* (Walker). China.
   Abraxas amplificata, Walker, List Lep. Ins. Brit. Mus. Vol. 24, p. 1124 (1862).
   Archaeopseustes amplificata, Warren, Novit. Zool. Vol. 1, p. 380 (1894).
   Terpna amplificata, Warren, ibidem, p. 681 (1894).

8. *T. leucomelanaria* (Poujade). W. China.
Pachyodes leucomelanaria, Poujade, Ann. Soc. Ent. Fr. Vol. 64, p. 311, t. —, f. 17 (1895).
Archaeopseustes leucomelanaria, Leech, Ann. Mag. Nat. Hist. (6), Vol. 2[illegible], p. 230 (1897).

SUBGENUS V. — Wing-margins scarcely crenulate, that of hindwing well rounded; cells not very short; antenna short, in ♂ with moderate, in ♀ with short pectinations (*Pachista*, *nov.*, Prout; type : *T. superans*, Butler).

9. *T. superans* (Butler). Japan, Corea.
Hypochroma superans, Butler, Ann. Mag. Nat. Hist. (5), Vol. 1, p. 308 (1878); Ill. Het. Coll. Brit. Mus. Vol. 3, p. 30, t. 49, f. 12 (1879).
Pseudoterpna superans, Leech, Ann. Mag. Nat. Hist. (6), Vol. 20, p. 228 (1897).
10. *T. luteipes* (Felder) (huj. subgen. ?). Cochin China.
Pachyodes luteipes, Felder, Reise Novara, Lep. Het. t. 125, f. 8 (1875).

SUBGENUS VI. — Wing-margins distinctly crenulate; cells not very short; antenna about two-thirds, in ♀ very rarely (*neonoma*) pectinate; metathorax slightly crested, abdominal crests well developed; underside not golden-yellow, without large roundish discal spots (*Lophophelma*, *nov.*, Prout; type : *T. vigens*, Butler).

11. *T. varicoloraria* (Moore). N. India
Hypochroma varicoloraria, Moore, Proc. Zool. Soc. Lond. p. 633 (1867).
Pseudoterpna varicoloraria, Hampson, Fauna Ind. Moths, Vol. 3, p. 475 (1895).
Terpna varicoloraria, Warren, Novit. Zool. Vol. 5, p. 233 (1898).
12. *T. costistrigaria* (Moore). N. India.
Hypochroma costistrigaria, Moore, Proc. Zool. Soc. Lond. p. 633 (1867).
Pingasa costistrigaria, Moore, Lep. Coll. Atkinson, p. 248 (1888).
Pseudoterpna costistrigaria, Hampson, Fauna Ind. Moths, Vol. 3, p. 474 (1895).
13. *T. vigens* (Butler). N. India.
Hypochroma vigens, Butler, Ann. Mag. Nat. Hist. (5), Vol. 6, p. 127 (1880); Ill. Het. Coll. Brit. Mus. Vol. 6, p. 63, t. 110, f. 3 (1886).
Pingasa vigens, Moore, Lep. Coll. Atkinson, p. 247 (1888).
Pachyodes vigens, Swinhoe, Trans. Ent. Soc. Lond. p. 167 (1894).
Pseudoterpna vigens, Hampson, Fauna Ind. Moths, Vol. 3, p. 475 (1895).
14. *T. similis* (Moore). India
Pingasa similis, Moore, Lep. Coll. Atkinson, p. 248 (1888).
Pachyodes ruficosta, Hampson, Ill. Het. Coll. Brit. Mus. Vol. 8, p. 105, t. 150, f. 16 (1891).
Pachyodes similis, Swinhoe, Trans. Ent. Soc. Lond. p. 170 (1894).
Pseudoterpna similis, Hampson, Fauna Ind. Moths, Vol. 3, p. 475 (1895).
15. *M. erionoma* (Swinhoe). Khasis.
Pachyodes erionoma, Swinhoe, Ann. Mag. Nat. Hist. (6), Vol. 12, p. 219 (1893).
Pseudoterpna erionoma, Hampson, Fauna Ind. Moths, Vol. 3, p. 474 (1895).
16. *T. ruficoloraria*, Warren. Borneo.
Terpna ruficoloraria, Warren, Novit. Zool. Vol. 4, p. 32 (1897).
17. *T. rubroviridata*, Warren. Penang to Borneo.
Terpna rubroviridata, Warren, Novit. Zool. Vol. 5, p. 232 (1898).
18. *T. tenuilinea*, Warren. Sumbawa.
Terpna tenuilinea, Warren, Novit. Zool. Vol. 6, p. 10 (1899).
19. *T. paroptila* (Turner) (huc ponenda ?) N. Queensland.
Pseudoterpna paroptila, Turner, Trans. Roy. Soc. S. Austral. Vol. 30, p. 130 (1906).
Terpna paroptila, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 35, p. 638 (1910).
20. *T. neonoma* (Hampson) Ceylon.
Pseudoterpna neonoma, Hampson, Journ. Bombay Nat. Hist. Soc. Vol. 18, p. 52, t. E, p. 24 (1907).

21. *T. differens*, Warren (huj. subgen.?). N. India.
Terpna differens, Warren, Novit. Zool. Vol. 16, p. 124 (1909).
22. **T. calaurops, nov. sp.** 1) Prout. Hong-Kong.
23. *T. funebrosa*, Warren (trans. ad subgen. sequ.?). Khâsis.
Terpna funebrosa, Warren, Novit. Zool. Vol. 3, p. 308 (1896).

SUBGENUS VII. — Wing-margins distinctly crenulate, of hindwing slightly irregular; cells not very short; antenna about two-thirds, in ♂ shortly, in ♀ not pectinate; metathorax moderately crested, abdominal crests strong; underside golden-yellow, with large roundish discal spots (*Dindicodes, nov.*, Prout; type : *T. crocina*, Butler).

24. *T. apicalis* (Moore) (trans. ad subgen. præc.?). N. India.
Pingasia apicalis, Moore, Lep. Coll. Atkinson, p. 247 (1888).
Pingasa apicalis, Cotes & Swinhoe, Cat. Moths Ind. (4), p. 506 (1888).
Pseudoterpna apicalis, Hampson, Fauna Ind. Moths, Vol. 3, p. 476 (1895).
Terpna apicalis, Warren, Novit. Zool. Vol. 3, p. 308 (1896).
25. *T. crocina* (Butler). N. India.
Hypochroma crocina, Butler, Ann. Mag. Nat. Hist. (5), Vol. 6, p. 126 (1880); Ill. Het. Coll. Brit. Mus. Vol. 6, p. 63, t. 116, f. 2 (1886).
Dindica crocina, Cotes & Swinhoe, Cat. Lep. Ind. (4), p. 506 (1888).
26. *T. leopardinata* (Moore). N. India, Tibet.
Hypochroma leopardinata, Moore, Proc. Zool. Soc. Lond. p. 634 (1867).
? *Dindica leopardinata*, Moore, Lep. Coll. Atkinson, p. 248 (1888) (= sequ. spec.?).
Pseudoterpna leopardinata, Hampson, Fauna Ind. Moths, Vol. 3, p. 477 (1895).
27. *T. mölleri* (Warren). Sikkim.
Dindica mölleri, Warren, Proc. Zool. Soc. Lond. p. 349 (1893).
28. *T. davidaria* (Poujade). W. China.
Pachyodes davidaria, Poujade, Ann. Soc. Ent. Fr. Vol. 64, p. 310, t. 7, f. 16, 16*a* (1895).
Pseudoterpna davidaria, Leech, Ann. Mag. Nat. Hist. (6), Vol. 20, p. 229 (1897).

D. — ♂ *antenna with long pectinations.*

SUBGENUS VIII. — Wing-margins strongly crenulate; cells one-half; face and vertex rough-scaled; antenna little over one-half; thorax robust, metathorax slightly crested, abdomen with rather broad, not very high crests; underside with broad, velvety subterminal bands [*Hypobapta, nov.*, Prout = *Hypochroma*, Guenée, nom. præocc. 2)] (gen. div.?).

29. *T. percomptaria* (Guenée). Australia.
Hypochroma percomptaria, Guenée, Spec. Gen. Lép. Vol. 9, p. 280, t. 6, f. 4 (1858).
Terpna percomptaria, Herrich-Schäffer, Samml. Aussereur. Schmett. Vol. 1, p. 62, 84, t. 95, f. 544, 545 (1858).
Pseudoterpna percomptaria, Swinhoe, Lep. Het. Oxford Mus. Vol. 2, p. 385 (1900).

Note. — *Hypochroma nyssiata*, Felder, *Reise Novara, Lep. Het.* t. 125, f. 3, is a Lymantriid, closely allied to, or identical with *Munychryia senicula*, Walker; *H. edmondsii*, Butler, *Trans. Ent. Soc.*

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1) **Terpna (Lophophelma) calaurops, nov. sp.** — ♂, 40 mm. Nearly related to *T. vigens*, Butler, differing as follows : antennal pectinations somewhat longer, SC^1 of forewing anastomosing shortly with C (possibly individual, not specific), cell of hindwing slightly shorter, coloration of upper surface rather darker, with costa more strongly blackish-strigulated, of under surface less tinged with yellowish; forewing with the base and a shade following the antemedian line reddish, area outside basal line light olive, not white; antemedian line not outcurved in submedian area, becoming rather more oblique at inner margin; postmedian line rather thicker, arising at 5 mm. from apex, the teeth on R^3 and M^1 much blunter; subapical spot light olive, not white; hindwing with discal mark strong, produced along the base of R^1 so as to form a more pronounced crook than in *vigens*; postmedian line with the teeth followed by thick black vein-marks; subterminal bands beneath broad, that on forewing followed by some dark shading which nearly absorbs the white terminal area, leaving free only a small apical patch and some very small patches or spots between R^3 and tornus. Hong Kong. Type in coll. L. B. Prout.

2) Type : *percomptaria*, Guenée, Moore sel. (*Lep. Ceyl.* Vol. 3, p. 410).

Lond. 1882, p. 364, a Larentiine (genus *Xanthorhoë*); *H. maculata*, Lucas, *Proc. Linn. Soc. N. S. Wales* (2), Vol. 4, p. 1095 (sec. specim. typ.) is a close relative of *Racotis boarmiaria*, Guenée (subfamily *Geometrinae* — *Boarmiinae*), differing only in the antennal structure. Other species erroneously erected as *Hypographa* have been correctly removed by Hampson and Meyrick.

17. Genus DINDICA, Moore

Dindica. Moore, Lep. Coll. Atkinson, p. 248 (1888).
Perissolophia. Warren, Proc. Zool. Soc. Lond. p. 350 (1893).
Pseudoterpna, sect. II. Hampson, Fauna Ind. Moths, Vol. 3, p. 477 (1895).

Characters. — Face strongly protuberant below, with dense tuft of projecting scales. Palpus moderate (length nearly twice diameter of eye), rather stout, second joint densely long-haired, third joint more shortly scaled, in ♂ moderate, in ♀ rather elongate. Tongue developed. Antenna rather long (about two-thirds length of forewing), in ♂ bipectinate to beyond one-half, with shortish or quite moderate pectinations, in ♀ minutely ciliated. Thorax with very powerfully developed posterior crests. Pectus and femora densely hairy. Hindtibia in ♂ dilated with hair-pencil, in both sexes with all spurs. Abdomen crested, the crest on fourth segment very strong (Pl. 5). Forewing not broad, costa slightly arched, apex moderate, termen oblique, little convex, waved, tornus more or less rounded off, cell nearly one-half, DC incurved, SC^1 free, $SC^{2\text{-}5}$ normal, R^1 just separate or sometimes connate, R^2 from little above the middle of cell, M^1 separate; hindwing with apex rounded, termen somewhat crenulate, strongly convex, termen usually pronounced, cell somewhat less than one-half, DC^2 usually somewhat curved, DC^3 oblique, C approximated to cell to less than one-half, then very strongly diverging, SC^2 approximated to R^1, sometimes connate or even (rarely) minutely stalked, R^2 characteristic, M^1 approximated to R^3. ♂ genitalia : uncus pointed, bifurcate, gnathos strongly scobinated, harpes elaborately dentate, penis pestillate, coremata present.

Early stages unknown.

Differs from *Terpna* in the exaggerated crests, tufted frons, and probably other slight characters. Nearest the subgenus *Dindicodes*.

Type of the genus : *Dindica polyphaenaria* (Guenée) = *Hypochroma polyphaenaria*, Guenée = *Dindica basiflavata*, Moore (1888).

Geographical distribution of species. — N. India to Japan and Formosa, Celebes, etc.

1. *D. polyphaenaria* (Guenée). — N. India, Borneo, Formosa.
   Hypochroma polyphaenaria, Guenée, Spec. Gen. Lép. Vol. 9, p. 280 (1858).
   Hypochroma basiflavata, Moore, Proc. Zool. Soc. Lond. p. 632 (1867).
   Dindica basiflavata, Moore, Lep. Coll. Atkinson, p. 248 (1888).
   Pseudoterpna polyphaenaria, Swinhoe, Trans. Ent. Soc. Lond. p. 170 (1894).
   Dindica polyphaenaria, Warren, Novit. Zool. Vol. 1, p. 382 (1894).
2. *D. para*, Swinhoe. — N. India.
   Dindica para, Swinhoe, Trans. Ent. Soc. Lond. p. 490 (1891).
   Pseudoterpna polyphaenaria (part.), Hampson, Fauna Ind. Moths, Vol. 3, p. 477 (1895) nec Guenée.
3. *D. marginata*, Warren. — Celebes, Borneo.
   Dindica marginata, Warren, Novit. Zool. Vol. 1, p. 382 (1894).
4. *D. virescens* (Butler). — Japan, Corea.
   Bylazora virescens, Butler, Ann. Mag. Nat. Hist. (5), Vol. 1, p. 398 (1878); Ill. Het. Coll. Brit. Mus. Vol. 3, p. 35, t. 49, f. 8 (1879).

Pseudoterpna koreana, Alphéraky, Roman. Mém. Lép. Vol. 9, p. 181, t. 10, f. 6 (1897) (nov. syn.).
Actenochroma virescens, Leech, Ann. Mag. Nat. Hist. (6), Vol. 20, p. 230 (1897).

5. *D. subrosea* (Warren). — Pl. 1, Fig. 5. N. India.
Perissolophia subrosea, Warren, Proc. Zool. Soc. Lond. p. 350 (1893).
Pseudoterpna subrosea, Hampson, Fauna Ind. Moths, Vol. 3, p. 478 (1895).

6. *D. subsimilis* (Warren). N. India.
Perissolophia subsimilis, Warren, Novit. Zool. Vol. 5, p. 232 (1898).
Pseudoterpna subsimilis, Hampson, Journ. Bombay Nat. Hist. Soc. Vol. 14, p. 654 (1902).

7. *D. purpurata*, Bastelberger. Formosa.
Dindica purpurata, Bastelberger, Intern. Ent. Zeit. Guben, Vol. 4, p. 248 (1911).

18. Genus CYNEOTERPNA, nov. nom., Prout

Cyneoterpna, nov. nom. Prout.
Autanepsia. Turner, Proc. Linn. Soc. N. S. Wales, Vol. 35, p. 629 (1910) (nec Turner, 1908).

Characters. — Frons tufted. Head with a hood projecting above frons. Palpus rather long, second joint hairy beneath, third joint long, close-scaled. Tongue developed. Antenna in ♂ bipectinate with moderate branches, apical one-third simple; in ♀ simple. Pectus and femora densely hairy. Hindtibia in ♂ not dilated, in both sexes with all spurs. Abdomen very slightly crested. Frenulum fully developed. Forewing rather elongate, costa nearly straight, termen crenulate, DC incurved, SC^1 from cell, anastomosing with C and SC^2, SC^{2-5} stalked, from well before R^1, R^2 from close to R^1 (exceptionally even stalked), M^1 separate; hindwing with apex somewhat cut away, termen crenulate, especially from R^3 to M^2, inner margin rather long, C approximated to cell near one-half, then rapidly diverging, SC^2 rather widely separate from R^1, R^2 from close to R^1, M^1 well separate.

Early stages unknown.

Probably related to *Terpna* (*Hypobapta*) *percomptaria*, though not extremely closely.

Type of the genus : *Cyneoterpna wilsoni* (Felder) = *Hypochroma wilsoni*, Felder.

Geographical distribution of species. — Australian.

1. *C. wilsoni* (Felder). S. E. and N. E. Australia.
Hypochroma wilsoni, Felder, Reise Novara, Lep. Het. t. 125, f. 4, 4*a* (1875).
Autanepsia wilsoni, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 35, p. 630 (1910).

19. Genus SPHAGNODELA, Warren

Sphagnodela. Warren, Proc. Zool. Soc. Lond. p. 351 (1893).

Characters. — Face somewhat protuberant; face and vertex strongly rough-scaled. Palpus quite moderate, rough-scaled, in both sexes with terminal joint quite small. Tongue developed. Antenna in ♂ with rather short, clavate pectinations to near apex, in ♀ almost simple. Metathorax slightly crested. Pectus and femora hairy. Hindtibia in ♂ not dilated, in both sexes with all spurs well developed. Abdomen crested. Frenulum fully developed. Forewing with costa arched, apex moderate, termen rounded, waved, not very long, cell about one-half, discocellulars curved, DC^3 becoming very oblique, SC^1 anastomosing with C, SC^2 normal, sometimes anastomosing at a point with SC^1, R^1 separate, M^1 widely separate; hindwing with costa longer than in the allies, apex rather pronounced,

termen not strongly convex, waved, inner margin not elongate, cell less than one-half, DC^3 deeply incurved anteriorly, becoming very oblique posteriorly, C approximated to cell to at least one-half, not very rapidly diverging, SC^2 connate or more usually short-stalked with R^1, rarely just separate, R^2 from near R^1, M^1 widely separate.

Early stages unknown.

Perhaps another derivative of *Terpna*, but rather isolated; hindwing proportions differing from those of all the preceding genera of the group.

Type of the genus : *Sphagnodela lucida*, Warren (1893).

Geographical distribution of species. — N. India to Tibet.

1. *S. lucida*, Warren. N. India, Tibet.
Sphagnodela lucida, Warren, Proc. Zool. Soc. Lond. p. 351, t. 32, f. 13 (1893).

20. Genus CRYPSIPHONA, Meyrick

Crypsiphona Meyrick, Proc. Linn. Soc. N. S. Wales (2), Vol. 2, p. 901 (1888); Turner, ibidem, Vol. 35, p. 630 (1910).

Characters. — Face not protuberant, smoothly scaled. Palpus moderate, second joint hairy beneath, third joint moderate (*melanosema*) or short. Tongue developed. Antenna rather long, in ♂ bipectinate to at least three-fourths with moderate branches, apex minutely ciliated, in ♀ minutely ciliated. Thorax sometimes with slight anterior crest. Pectus and femora densely hairy. Hindtibia in ♂ sometimes dilated (fide Meyrick), sometimes simple (*ocultaria*), in both sexes with terminal spurs only. Abdomen not appreciably crested, with lateral tufts. Frenulum fully developed. Forewing with costa very slightly arched, apex rather pronounced, termen oblique, subcrenulate, cell nearly one-half, DC slightly incurved (sometimes nearly straight), SC^1 from cell, anastomosing with C and with SC^2 (occasionally SC^2 even touches C at a point), SC^{2-5} from near to or even very short-stalked with R^1, M^1 separate; hindwing with costa rounded, termen crenulate, tornus more or less rounded, inner margin long, cell somewhat less than one-half, DC very oblique, nearly straight to sinuous, C shortly approximated to cell, then strongly diverging, SC^2 separate (or connate, fide Turner), M^1 separate. ♂ genitalia : uncus bifid (two broad arms), emarginate at the tip, gnathos practically atrophied, harpe of irregular shape, with projecting sacculus, penis rounded, with a strong thorny cornulus on the vesica; on the eighth sternite there is a fold emitting a fringe of spatulate scales, divided into three parts by two pairs of longer scales.

Early stages apparently undescribed; larva of *ocultaria* on *Eucalyptus*.

Type of the genus : *Crypsiphona melanosema*, Meyrick (1910) [1].

Geographical distribution of species. — Australian.

1. *C. melanosema*, Meyrick. W. Australia.
Crypsiphona melanosema, Meyrick, Proc. Linn. Soc. N. S. Wales (2), Vol. 2, p. 901 (1888).
2. *C. ocultaria* (Donovan). Australia.
Phalaena ocultaria, Donovan, Ins. New Holland, t. [36], f. **** (1805).

1) Turner's selection is the oldest known to us, but is rather unfortunate, as he redescribes the genus from *cultaria*; moreover, other strong recommendations which have been put forward for the selection of types point to *ocultaria* as the better choice; it is the commonest and best-known species, and the generic name has a similar significance to the specific one.

Boarmia ocultaria, Boisduval. Faune Ent. Pacif. Vol. 1, p. 257 (1832).
Hypochroma occultaria, Guenée, Spec. Gén. Lép. Vol. 9, p. 281 (1858).
Crypsiphona occultaria, Meyrick. Proc. Linn. Soc. N. S. Wales (2), Vol. 2, p. 903 (1888).

3 *C. amaura*, Meyrick. W. Australia
Crypsiphona amaura, Meyrick. Proc. Linn. Soc. N. S. Wales (2), Vol. 2, p. 902 (1888).

21. Genus SYNCLYSMUS, Butler

Synclysmus. Butler, Ann. Mag. Nat. Hist. (5), Vol. 4, p. 242 (1879).

Characters. — Face and vertex rough-haired. Palpus small, second joint rough-scaled, third joint in ♂ minute, concealed (♀ unknown). Tongue wanting. Antenna short, in ♂ bipectinate to about two-thirds, with long, rapidly decreasing pectinations. Pectus and femora strongly hairy. Hindtibia in ♂ rather short, greatly swollen, with terminal spurs only. Metathorax apparently crested (abraded). Abdomen crested. Frenulum fully developed. Forewing with costa straight (or almost concave) in proximal part, arched distally, apex moderate, termen rather straight, faintly waved, cell about one-half, DC gently incurved, SC^1 free or anastomosing with C, SC^{2-5} normal, R^1 just separate, M^1 separate; hindwing with apex rounded, termen waved, rounded, inner margin long, cell almost one-half, DC somewhat incurved, becoming oblique, C approximated to cell for some distance, then moderately rapidly diverging, SC^2 connate, R^2 from somewhat above middle of DC, M^1 connate or just separate, M^2 from near M^1.

Early stages unknown.

This and the following genus are probably not very nearly related to those that have preceded, though they seem to be derivatives of the same main stirps. Their white or whitish colour dissociates them superficially therefrom.

Type of the genus : *Synclysmus niveus*, Butler (1879).

Geographical distribution of species. — Madagascar.

1. *S. niveus*, Butler. Madagascar.
Synclysmus niveus, Butler, Ann. Mag. Nat. Hist. (5), Vol. 4, p. 242 (1879).

22. Genus XENOCHROMA, Warren

Xenochroma. Warren, Novit. Zool. Vol. 9, p. 497 (1902).

Characters. — Face not protuberant, shortly scaled. Palpus rather short, rather slender, second joint shortly scaled, third joint quite small. Tongue short and slender. Antenna (in ♂ not certainly known) in ♀ bipectinate to beyond two-thirds, with short branches, apex nearly simple, with single short bristles, or merely serrate. Pectus strongly hairy. Hindtibia in ♂ much dilated (*salsa*), in both sexes with terminal spurs only. Abdomen crested, in ♀ very robust. Frenulum developed, or in ♀ rather weak, costa of hindwing without appreciable basal expansion. Forewing with costa slightly arched, apex acute, termen not crenulate, in the type species strongly elbowed at M^1, cell less than one-half, DC incurved, SC^1 free, from cell or connate with SC^{2-5}, SC^2 normal, M^1 stalked or just separate; hindwing with apex moderate, termen convex, in type species strongly elbowed at M^1, cell less than one-half, DC incurved, C approximated closely to cell for a short distance (sometimes fused at a

point), moderately rapidly diverging, SC^2 about connate, R^2 moderately characteristic, M^1 stalked (separate in *salsa*).

Early stages unknown.

A more specialized genus than any of the preceding, apparently, in common with those which follow, somewhat transitional towards our fourth Group.

Types of the genus : *Xenochroma candidata*, Warren (1902).

Geographical distribution of species. — Ethiopian.

1. *X. candidata*, Warren. — E. Africa.
   Xenochroma candidata, Warren, Novit. Zool. Vol. 9, p. 498 (1902).
2. **X. planimargo, nov. sp.** 1), Prout. — Nyassaland.
3. *X. salsa* (Warren) (huj. gen.?). — Sierra Leone.
   Pareuchloris (?) salsa, Warren, Novit. Zool. Vol. 4, p. 43 (1897).

23. Genus PSEUDOTERPNA, Hübner

Pseudoterpna, Hübner, Verz. bek. Schmett. p. 284 (1826?); Herrich-Schäffer, Samml. Aussereur. Schmett., Vol. 1, p. 26 (1856).

Characters. — Face smooth. Palpus in both sexes quite moderate, slightly upcurved, second joint hairy beneath, third joint minute, concealed. Tongue present. Antenna moderate, in ♂ bipectinate with short branches, apex simple; in ♀ filiform, minutely ciliated. Pectus and femora hairy. Hindtibia in ♂ somewhat dilated, with pencil of rather short hair, in both sexes with all spurs. Abdomen crested. Hindwing with very slight (almost negligeable) costal expansion, frenulum in ♂ developed, in ♀ consisting of only a few long hairs. Forewing with costa scarcely arched, apex pronounced, termen entire, oblique, cell nearly one-half, DC variably curved, SC^1 usually free, occasionally anastomosing with C, SC^2 normal, R^1 connate or just separate, R^2 above middle of DC (sometimes considerably above). M^1 separate; hindwing with costa not short, apex somewhat rounded, termen little convex, inner margin scarcely elongate, cell nearly one-half, DC curved, C approximated to cell to about one-half, then rather gradually diverging, SC^2 connate or just separate, R^2 above middle of DC (sometimes extreme), M^1 separate. ♂ genitalia with uncus bifurcate, gnathos blunt, squared at the tip, with small (*pruinata*) or large (*coronillaria*) scobinations, harpe with spined clasper, penis rounded at the base, ædœagus with saw-like projection at the orifice.

Larva. — Moderately stout, rigid, nearly cylindrical, with slight lateral flange; head bilobed, the lobes produced to points anteriorly; skin-surface strongly shagreened, prothorax with two points anteriorly, anal flap triangular, tubercles and setæ very small. (All three species figured by Millière, *Icon. Chen.*, t. 91.)

Pupa. — Moderate, tapering anteriorly, light-brown or clay-colour, irregularly dark-spotted; supra-anal plate long, anal armature apparently simpler than in most of the observed species. In a few threads among food-plant.

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1) **Xenochroma planimargo, nov. sp.** — ♀, 40 mm. Build and coloration entirely as in *X. candidata*, Warren, differing only as follows : palpus perhaps slightly stronger, antenna merely serrate, termen of forewing nearly straight (slightly bowed), of hindwing strongly rounded, neither wing with the slightest elbow at M^1. Face, front of foreleg and outside and tip of palpus crimson, all else white, wings slightly dusted with ochreous grey, and with faint traces of ochreous grey postmedian line, as in *candidata*. Forewing with M^1 just separate, hindwing with M^1 scarcely stalked. Blantyre, Nyassaland (J. E. S. Old). Type in coll. Brit. Mus.

This genus is probably derived from a near relative of *Pingasa* or of *Epipristis;* the genitalia suggest a rather definite relationship with the latter. Meyrick and Hampson even merged many of the Indo-Australian forms in *Pseudoterpna*. Turner has pointed out that the advance towards specialization in frenulum-structure is too marked to warrant this (*Proc. Linn. Soc. N. S. Wales*, Vol. 35, p. 635), with which we are fully in accord, although we do not find the ♀ frenulum literally « obsolete », and rather prefer to show the natural affinities of the genus by placing it at the summit of Group II than removing it to Group V.

Type of the genus : *Pseudoterpna pruinata* (Hufnagel) — *Phalaena pruinata*, Hufnagel = *Pseudoterpna cytisaria*, Hübner (1856).

Geographical distribution of species. Europe to W. China.

1. *P. pruinata* (Hufnagel). Europe to Armenia.

Phalaena pruinata, Hufnagel, Berlin. Mag. Vol. 4, p. 520 (1767).
Phalaena prasinaria, Fabricius, Syst. Ent. p. 626 (1775) (nec Hufnagel, 1767).
Phalaena papilionaria (?), Wilkes, Engl. Moths and Butterfl. p. 6, t. 75 (1773) (nec Linnè).
[*Phalaena*] *Geometra cythisaria* (Schiffermüller), Schmett. Wien, p. 97 (1775).
Geometra cythisiaria, Jung, Verz. Eur. Schmett. p. 40 (1782).
Geometra genistaria, De Villers, Ent. Linn. Vol. 2, p. 328 (1789).
Pseudoterpna cytisaria, Hübner, Verz. bek. Schmett. p. 285 (1826?).
Hipparchus cythisaria, Stephens, Cat. Brit. Ins. (2), p. 123 (1829).
Hemithea genistaria, Duponchel, Hist. Nat. Lép. Vol. 7 (2), p. 252 1829).
Hemithea agrestaria, Duponchel, ibidem, p. 257 (1829).
Hemithea cythisaria, Boisduval, Gen. et Ind. Meth. Eur. Lep. p. 180 (1840).
? *Hemithea porracearia* (Rambur, MS.), Boisduval, ibidem (1840) (nom. nud.).
Pseudoterpna pruinata, Lederer, Verh. Zool.-bot. Ges. Wien, Vol. 3, p. 172, f. 1 (1853).
Pseudoterpna pruinata var. *virellata*, Krulikovsky, Soc. Ent. Zürich, Vol. 23, p. 11 (1908) (var.?).

2. *P. coronillaria*, Hübner. S. Europe to Taurus.

Geometra coronillaria, Hübner, Samml. Eur. Schmett. Geom. t. 03, f. 479-482 (1818?).
Pseudoterpna coronillaria, Hübner, Verz. bek. Schmett. p. 285 (1826?).
Hemithea coronillaria, Duponchel, Hist. Nat. Lép. Vol. 7 (2), p. 255 (1829).
Pseudoterpna axillaria, Guenée, Spec. Gén. Lép. Vol. 9, p. 339 (1858) (var.?).
Pseudoterpna coronillaria ab. *armoraciaria*, Oberthür, Et. Ent. Liv. 20, p. 71, t. 6, f. 92 (1896) (ab.).

3. *P. corsicaria* (Rambur) (præc. var.?) Corsica, Sardinia.

Hemithea corsicaria, Rambur, Ann. Soc. Ent. Fr. Vol. 2, p. 32, t. 2, f. 6 (1833).
Pseudoterpna corsicaria, Herrich-Schaffer, Syst. Bearb. Schmett. Eur. Vol. 3, p. 12 (1846).
Geometra corsicaria, Heydenreich, Lep. Eur. Cat. Meth. (ed. 3), p. 51 (1851).

Note. — *Pseudoterpna diphtherina*, Meyrick, *Trans. Ent. Soc. Lond.* 1889, p. 496, is a variety or synonym of *Cernia amyclaria*, Walker. This was unfortunately unknown to us when we were working out the subfamily *Œnochrominae*, to which the genus belongs.

24. Genus APODASMIA, Turner

Apodasmia. Turner, Proc. Linn. Soc. N. S. Wales, Vol. 35, p. 612 (1910).

Characters. — Face scarcely protuberant, shortly scaled. Palpus moderate, second joint strong, rough-haired above and beneath, third joint in both sexes small, concealed. Tongue present.

Antenna in both sexes dentate, shortly ciliated. Pectus somewhat hairy. Femora glabrous. Hindtibia in ♂ not dilated, in both sexes with four well-developed spurs 1). Abdomen not crested. Hindwing in both sexes with pronounced basal expansion, yet with frenulum persisting, though slender in the ♂. Forewing broad, costa arched at base, then rather straight, apex acute, but not produced, termen waved, little oblique in anterior half, cell nearly one-half. DC somewhat incurved, SC^1 from cell, anastomosing with C, SC^2 from stalk of SC^{3-5} (its base very slender), anastomosing with SC^1, R^1 separate, R^2 considerably above middle, M^1 separate; hindwing with apex rounded, termen somewhat crenulate, inner margin slightly elongate, cell nearly one-half, DC somewhat curved, C approximated to cell to nearly one-half, then diverging, SC^2 separate, R^2 from close to R^1, M^1 separate.

Early stages unknown.

Another slightly intermediate genus between Groups II and V; yet here it is the ♂ frenulum which has progressed most towards the latter, whereas in *Pseudoterpna* it is the ♀.

Type of the genus : *Apodasmia rufonigraria* (Walker) = *Fidonia* (?) *rufonigraria*, Walker (1910).

Geographical distribution of species. — Australian.

1. *A. rufonigraria* (Walker). E., S. E. and W. Australia.

Fidonia (?) *rufonigraria* Walker, List Lep. Ins. Brit. Mus. Vol. 24, p. 1036 (1862).
Epipristis rufonigraria, Meyrick, Proc. Linn. Soc. N. S. Wales (2), Vol. 2, p. 916 (1888).
Apodasmia rufonigraria, Turner, ibidem, Vol. 35, p. 613 (1910).

25. Genus GNOPHOSEMA, nov. gen., Prout (hic ponendum?)

Gnophosema, nov. gen. Prout.

Characters. — Face smooth. Palpus rather short, second joint densely scaled beneath, third joint small concealed (♀ unknown). Tongue wanting. Antenna in ♂ moderately stout, with longish pectinations, extreme apex nearly simple. Pectus and femora somewhat hairy. Hindtibia in ♂ not dilated, with terminal spurs only. Abdomen not appreciably crested. Frenulum in ♂ developed, but with slight costal expansion. Wings shaped as in *Pseudoterpna*; forewing with cell one-half, DC incurved, SC^1 from cell, free or anastomosing with C, SC^2 stalked to beyond SC^5, M^1 approximated to R^3; hindwing with cell about one-half, DC slightly incurved, C approximated to cell to about one-half, rapidly diverging, SC^2 short-stalked with R^1, R^2 from somewhat above middle of DC, M^1 connate.

Early stages unknown.

Type of the genus : *Gnophosema isometra* (Warren) = *Gnophos isometra*, Warren.

Geographical distribution of species. — N. W. India.

1. *G. isometra* (Warren). N. W. India.

Gnophos isometra, Warren, Proc. Zool. Soc. Lond. p. 321 (1888).
Boarmia isometra, Hampson, Fauna Ind. Moths, Vol. 3, p. 283 (1895).

1) Turner refers to absence of inner terminal spur in ♂, which betokens either one of the rare cases of individual variability or a spur lost through some injury. We have only seen two males, but they both have the terminal spurs fully developed.

Group III

26. Genus DYSPHANIA, Hübner

Dysphania. Hübner, Verz. bek. Schmett. p. 175 (1826?).
Euschema. Hübner, ibidem, p. 175 (1826?).
Hazis. Boisduval, Faune Ent. Pacif. Vol. 1, p. 203 (1832).
Heleona. Swainson, Zool. Illustr. ser. 2, Vol. 3, t. 116 (1833).
Polenivora. Gistl, Naturg. Thier. p. 9 (1848).
Pareuschema. Thierry-Mieg, Le Naturaliste, Vol. 27, p. 181 (1905).

Characters. — Face rounded-prominent, densely scaled. Palpus rather long, second joint moderately rough-scaled, third joint rather long, cylindrical, smooth-scaled. Tongue developed. Antenna in both sexes bipectinate to apex, with rather short branches. Thorax robust, densely hairy beneath. Coxæ densely hairy. Femora scarcely hairy, except hindfemur of ♂. Foretibia rather short, tarsus rather long. Hindtibia in ♂ (except in Section II) with deep groove containing dense tuft of hair, in both sexes with all spurs present. Tarsi spinulose. Abdomen not crested, in ♂ woolly-haired beneath (except in Section II). Frenulum fully developed. Forewing in both sexes with a well-developed fovea. Wing-shape variable, fringes short. Forewing with costa nearly straight or slightly arched, termen smooth, little rounded, always very oblique (in the ♂ of the type species and its nearest allies excessively oblique), longer (or much longer) than inner margin, cell nearly one-half, usually produced apically, DC deeply incurved, SC^1 from cell, free or anastomosing with C (variable even in a single species), SC^2 normal, R^1 longish-stalked with SC^{2-5}, R^2 very characteristic, M^1 widely separate; hindwing with costa arched, apex not pronounced, termen strongly convex, usually more or less irregularly, the part from tornus to near R^3 straighter, a marked gibbosity about R^3, especially in ♂, cell one-half, or slightly over, DC^3 incurved, C approximated to cell in basal third, rapidly diverging, SC^2 separate, R^2 from near R^1, M^1 widely separate (**Pl. 1, Fig. 12**). ♂ genitalia (*militaris*) with uncus massive, tapered, gnathos strong, harpe with broad, extended sacculus, vinculum with long extended lower arm, penis triangular as the base, broader above, with strong two-pronged projection at orifice of aedœagus; large coremata.

Larva. — Cylindrical, smooth, segmentation well marked, head rather small, anal flap somewhat pointed; rests stiffly outstretched, with head and anterior segments bent downward; not fully described (see Janson, *Cist. Ent.* Vol. 2, p. 540, t. 10, p. 2; Moore, *Lep. Ceyl.* Vol. 3, p. 422, 423; Semper, *Reisen Philipp.* (2), Vol. 6, p. 635, t. U, f. 14; Dewitz, *Nova Acta Acad. Leop. d. Naturf. Halle*, Vol. 44(2), p. 267, t. 9, f. 10-10*b*).

Pupa. — Obtuse anteriorly, anal extremity furnished with numerous hooks; of the ordinary Geometrid form, brown in colour, spun between leaves (Janson, Moore, Semper, Dewitz, in loc. cit.).

An exceedingly natural genus, of somewhat uncertain affinities, though evidently correctly placed in the present subfamily. The possession of a fovea in both sexes is a very peculiar feature. Some of the other distinctions from Group II — the quite different wing-form, smoother scaling (usually with some hyaline or semi-hyaline areas), woolly clothing of abdomen beneath, long-stalking of R^1 of the forewing, etc. — may be, as Turner is inclined to believe, of secondary importance, and it is not unlikely that he may be justified in his view that the relationship to the *Terpna*-group is really not remote. Some of the species are variable, and the prevalence of geographical variation will render it

necessary to investigate the many forms anatomically before their true status can be established with even approximate correctness. We have considered it inexpedient to add to the existing confusion by introducing speculative synonymy, unless there seemed very strong grounds for it; it will probably prove, therefore, that we have erred in the other direction, of leaving too many forms distinct. Some good critical notes have been published by Bastelberger, *Stett. Ent. Zeit.* Vol. 66, p. 201-224, *Jahrb. Nassau. Ver. Nat.* Vol. 60, p. 73-77, etc.

Type of the genus : *Dysphania numana* (Cramer) = *Phalaena Attacus numana*, Cramer = *Dysphania numenia*, Hübner.

Geographical distribution of species. — Indo-Australian.

SECTION I. — ♂ hindtibia strongly dilated (*Dysphania*, Hübner).

1. *D. numana* (Cramer). — Pl. I, Fig. 6 1). — Celebes, Moluccas, Timor.
   Phalaena Attacus numana, Cramer, Pap. Exot. Vol. 3, p. 59, 176, t. 227, f. A, t. 228, f. A (1779).
   Bombyx numana, Olivier, Encycl. Méth. (Ins.) Vol. 5, p. 32 (1790).
   Dysphania numenia, Hübner, Verz. bek. Schmett. p. 175 (1826?).
   Dysphania numana, Walker, List Lep. Ins. Brit. Mus. Vol. 2, p. 342 (1854).
   Hazis numanaria, Guenée, Spec. Gén. Lép. Vol. 10, p. 190 (1858).
   Euschema flavata, Walker, List Lep. Ins. Vol. 31, p. 172 (1864) (nov. syn.) 1).
   Euschema numana, Röber, Tijdschr. v. Ent. Vol. 34, p. 332 (1891).
   Dysphania flavata, Swinhoe, Lep. Het. Oxford Mus. Vol. 2, p. 378 (1900).
   Dysphania numana arcuata, Bastelberger, Iris, Vol. 20, p. 257 (1907) (ab.).
   Dysphania numana albipunctulata, Bastelberger, ibidem, p. 258 (1907) (var.?).
   Dysphania numana leucophorata, Bastelberger, ibidem, p. 258 (1907) (*albipunctulata* ab.?).

2. *D. helenetta* (Walker) (præc. form.?). — Ceram, ? Woodlark.
   Euschema helenetta (White, MS.), Walker, List Lep. Ins. Brit. Mus. Vol. 7, p. 1667 (1856).

3. *D. goramensis*, Bastelberger (*numana* form.?). — Goram.
   Dysphania goramensis, Bastelberger, Stett. Ent. Zeit. Vol. 66, p. 215 (1905).

4. *D. peregrina*, Bastelberger. — Oby.
   Dysphania peregrina, Bastelberger, Ent. Zeit. Guben, Vol. 18, p. 115 (1905).

5. *D. fenestrata* (Swainson).
   a. *Dysphania fenestrata fenestrata*. — N. W. to N. Australia.
      Heleona fenestrata, Swainson, Zool. Ill. (2), Vol. 3, t. 116 (1833).
      ? *Hazis tasmaniae*, Le Guillou, Rev. Zool. Vol. 4, p. 257 (1841) 2).
      ? *Hazis tasmanicaria*, Guenée, Spec. Gén. Lép. Vol. 10, p. 189 (1858) (ead. ac præc.).
      Hazis velitaria, Guenée, ibidem, p. 191 (1858).
      Dysphania chalybeata, Butler, Ann. Mag. Nat. Hist. (4), Vol. 18, p. 127 (1876).
      Dysphania fenestrata, Kirby, Handb. Lep. Vol. 5, p. 236, t. 149, f. 1 (1897).
   b. *Dysphania fenestrata magnifica*. — N. Queensland.
      Dysphania magnifica, Swinhoe, Lep. Het. Oxford Mus. Vol. 2, p. 377 (1900).
      Dysphania purpurascens et *fulgurata*, Warren, MS. (in coll. Brit. Mus.)
   c. *Dysphania fenestrata splendida*. — E. Queensland.
      Dysphania splendida, Bastelberger, Stett. Ent. Zeit. Vol. 66, p. 216 (1905).

6. *D. tentans* (Walker) (præc. subsp.?).
   a. *Dysphania tentans tentans*. — Mysol to New Guinea, ?N. Queensland.
      Euschema tentans, Walker, List Lep. Ins. Brit. Mus. Vol. 31, p. 175 (1864).
      Dysphania tentans, Swinhoe, Lep. Het. Oxford Mus. Vol. 2, p. 378 (1900).
      Dysphania tentans ab. *velata*, Bastelberger, Stett. Ent. Zeit. Vol. 66, p. 212 (1905) (ab.).
   b. *Dysphania tentans subalbata*. — Trobriand Isl.
      Dysphania tentans subalbata, Warren, Novit. Zool. Vol. 9, p. 352 (1902).

1) We figured from a typical example of *flavata*, Walker, but afterwards arrived at the conclusion that this, and not the following, is the true *numana* of Cramer. His type figure (t. 227, f. A, ♂) is from a discoloured specimen, and almost unrecognizable.
2) Description unintelligible and locality (Hobart Town) probably inaccurate.

7. *D. tyrianthina* (Butler). — Duke of York Islands, ? Neu-Mecklenburg.
Heleona tyrianthina, Butler, Ann. Mag. Nat. Hist. (5), Vol. 10, p. 231 (1882).
Euschema thyriantina, Pagenstecher, Zoologica, Vol. 29, p. 150 (1900).

8. *D. fulvilauta*, Warren (præc. var. ?). — Neu-Hannover, Neu-Mecklenburg.
Dysphania fulvilauta, Warren, Novit. Zool. Vol. 9, p. 350 (1902).
Dysphania innotata, Warren, MS. (in coll. Brit. Mus.).

9. *D. snelleni* (Pagenstecher). — Moluccas.
Hazis snelleni, Pagenstecher, Jahrb. Nassau. Ver. Vol. 39, p. 163 (1886).

10. *D. semifulva*, Warren. — Solomons.
Dysphania semifulva, Warren, Novit. Zool. Vol. 16, p. 124 (1909).

11. *D. latiflava*, Warren. — New Guinea.
Dysphania latiflava, Warren, Novit. Zool. Vol. 2, p. 86 (1895).

12. *D. latiplaga*, Warren. — S. Celebes.
Dysphania latiplaga, Warren, Novit. Zool. Vol. 9, p. 351 (1902).

13. *D. contraria* (Walker). — Celebes.
Euschema contraria, Walker, List Lep. Ins. Brit. Mus. Vol. 31, p. 173 (1864).
Heleona bellicosa, Felder, Reise Novara, Lep. Het. t. 104, f. 1 (1874).
Dysphania contraria, Swinhoe, Lep. Het. Oxford Mus. Vol. 2, p. 378 (1900).

14. *D. melleata*, Warren (præc. subsp. ?). — N. Celebes.
Dysphania contraria melleata, Warren, Novit. Zool. Vol. 9, p. 350 (1902).

15. *D. longimacula*, Semper. — Philippines.
Dysphania longimacula, Semper, Reisen Philipp. (2), Vol. 6, p. 636, t. 65, f. 9 (1902) 1).

16. *D. cyane* (Cramer). — Moluccas to Bismarck Archipelago.
Phalaena Attacus cyane, Cramer, Pap. Exot. Vol. 3, p. 137, 174, t. 267, f. D (1780).
Bombyx cyane, Fabricius, Spec. Ins. Vol. 2, p. 506 (1781).
Dysphania cyane, Hübner, Verz. bek. Schmett. p. 175 (1826?).
Chelonia cyane, Verloren, Ins. Lep. Crameri, p. 102 (1837).
Euschema spectabilis, Walker, List Lep. Ins. Brit. Mus. Vol. 31, p. 174 (1864).
Hazis cyane, Pagenstecher, Jahrb. Nassau. Ver. Nat. Vol. 39, p. 162 (1886).
Euschema cyane, Röber, Tijdschr. v. Ent. Vol. 34, p. 332 (1891).

17. *D. flavimargo*, Warren. — Tenimber Isl.
Dysphania cyane ab. *flavimargo*, Warren, Novit. Zool. Vol. 9, p. 350 (1902).
Dysphania flavimargo, Bastelberger, Stett. Ent. Zeit. Vol. 66, p. 213 (1905).

18. *D. imperialis*, Warren. — Mefor.
Dysphania imperialis, Warren, Novit. Zool. Vol. 9, p. 351 (1902).

19. *D. regnatrix*, Warren. — Solomons.
Dysphania regnatrix, Warren, Novit. Zool. Vol. 9, p. 352 (1902).

20. *D. imperatrix*, Warren. — Isabel Isl. (Solomons).
Dysphania imperatrix, Warren, Novit. Vol. 10, p. 261 (1903).

21. *D. flavicorpus*, Warren. — Choiseul.
Dysphania flavicorpus, Warren, Novit. Zool. Vol. 16, p. 123 (1909).

22. *D. pilosa* (Butler). — Solomons.
Euschema pilosa, Butler, Ann. Mag. Nat. Hist. (5), Vol. 20, p. 240 (1887).

23. *D. centralis*, Rothschild. — British New Guinea.
Dysphania centralis, Rothschild, Novit. Zool. Vol. 8, p. 219, t. 10, f. 6 (1901).

24. *D. poeyii* (Guérin). — Waigeu.
Deileptena poeyii, Guérin, Voy. Coquille, t. 19, p. 3 (1830).
Hazis mars ♂, Boisduval, Faune Ent. Pacif. Vol. 1, p. 205 (1832).
Hazis martiaria, Guenée, Spec. Gén. Lep. Vol. 10, p. 190 (1858).
Euschema mars, Walker, List Lep. Ins. Brit. Mus. Vol. 2, p. 408 (1854).
Dysphania poeyi, Warren, Novit. Zool. Vol. 2, p. 87 (1895).
Euschema poeyi, Thierry-Mieg, Le Naturaliste, Vol. 29, p. 175 (1907).

25. *D. kühnii* (Pagenstecher) (præc. form. ♀?). — Waigeu to Aru Islands.
Hazis mars ♀, Boisduval, Faune Ent. Pacif. Vol. 1, p. 205 (1832) (nov. syn., fide Thierry-Mieg in litt.).
Hazis kühnii, Pagenstecher, Jahrb. Nassau. Ver. Nat. Vol. 39, p. 162 (1886).
? *Dysphania remota* ab. ♀ *bicolor*, Warren, Novit. Zool. Vol. 8, p. 193 (1901).
Euschema vulcanus, Thierry-Mieg, Le Naturaliste, Vol. 29, p. 175 (1907).

1) Semper's publication has apparently two months' priority over Warren's in *Novit. Zool.* Vol. 9, p. 351.

26. *D. remota* (Walker) 1).

a. *Dysphania remota remota*. — Mysol, Bachian, ? Waigeu.

Euschema remota, Walker, List Lep. Ins. Brit. Mus. Vol. 31, p. 170 (1864).
Euschema cyanoptera, Pagenstecher, Ent. Nachr. Vol. 22, p. 54 (1896); Abh. Senckenb. Ges. Vol. 23, p. 458, t. 20, f. 10 (1897).
Dysphania remota, Swinhoe, Lep. Het. Oxford Mus. Vol. 2, p. 378 (1900).
? *Euschema remota*, var. *auctata*, Thierry-Mieg, Le Naturaliste, Vol. 27, p. 181 (1905) (ab.?).
? *Euschema remota* var. *albimacula*, Thierry-Mieg, ibidem (1905) (ab.?).

b. *Dysphania remota confluens*. — Oby, Dutch New Guinea.

Dysphania confluens, Warren, Novit. Zool. Vol. 2, p. 86 (1895).

27. *D. binotata* (Walker). — Ceram.

Euschema binotata, Walker, List Lep. Ins. Brit. Mus. Vol. 31, p. 170 (1864).
Dysphania binotata, Swinhoe, Lep. Het. Oxford Mus. Vol. 2, p. 378 (1900).
Euschema auristriga, Walker, MS. (in coll. Brit. Mus.).
Dysphania auristriga, Warren, Novit. Zool. Vol. 2, p. 86 (1895) (vix descr.).

28. *D. bernsteinii* (Felder) (præc. var.?). — Waigeu, ? Aru Isl.

Heleona bernsteinii, Felder, Reise Novara, Lep. Het. t. 104, p. 2 (1874).
? *Hazis bernsteinii*, Pagenstecher, Jahrb. Nassau. Ver. Nat. Vol. 39, p. 162 (1886).
Dysphania bernsteini, Warren, Novit. Zool. Vol. 2, p. 86 (1895).
Euschema bernsteini, Thierry-Mieg, Le Naturaliste, Vol. 27, p. 181 (1905).

29. *D. luteopicta* (Walker). — Ceram.

Euschema luteopicta, Walker, List Lep. Ins. Brit. Mus. Vol. 31, p. 177 (1864).
Dysphania luteopicta, Swinhoe, Lep. Het. Oxford Mus. Vol. 2, p. 379 (1900).

30. *D. auriplena* (Thierry-Mieg). — Waigeu.

Euschema auriplena, Thierry-Mieg, Le Naturaliste, Vol. 27, p. 181 (1905).

31. *D. andamana* (Moore). — Andamans.

Euschema andamana, Moore, Proc. Zool. Soc. Lond. p. 509 (1877); Waterhouse, Aid, Vol. 1, t. 11 (1881).
Dysphania andamana, Swinhoe, Lep. Het. Oxford Mus. Vol. 2, p. 379 (1900).
Dysphania andamana ab. *quadriplagiata*, Bastelberger, Intern. Ent. Zeit. Guben, Vol. 5, p. 55 (1911) ab.).
Dysphania andamana ab. *transgressa*, Bastelberger, ibidem, p. 55 (1911) (ab.).

32. *D. militaris* (Linné).

a. *Dysphania militaris militaris*. — India, China, Java, etc.

Phalaena Bombyx militaris, Linné, Syst. Nat. (ed. 10), Vol. 1, p. 505 (1758).
Phalaena Attacus militaris, Linné, ibidem (ed. 12), Vol. 1 (2), p. 811 (1767).
Bombyx militaris, Fabricius, Syst. Ent. p. 559 (1775).
Euschema militaris, Hübner, Verz. bek. Schmett. p. 175 (1826?).
Hazis militaris, Boisduvul, Faune Ent. Pacif. Vol. 1, p. 203 (1832).
Heleona militaris, Swainson, Zool. Ill. (2), Vol. 3, p. 116 (1833).
Hazis militaria, Guenée, Spec. Gén. Lép. Vol. 10, p. 193 (1858).
Euschema abrupta, Walker, Trans. Ent. Soc. Lond. (3), Vol. 1, p. 70 (1862).
Dysphania militaris ab. *siamensis*, Bastelberger, Stett. Ent. Zeit. Vol. 66, p. 222 (1905) (ab.).
Dysphania militaris ab. *nigromarginata*, Bastelberger, Jahrb. Nassau. Ver. Nat. Vol. 60, p. 70 (1907) (ab.).

b. *Dysphania militaris sagana*. — Cochin China, Siam.

Euschema sagana, Druce, Proc. Zool. Soc. Lond. p. 781, t. 91, p. 3 (1882).

c. *Dysphania militaris selangora*. — Malacca.

Euschema selangora, Swinhoe, Ann. Mag. Nat. Hist. (6), Vol. 12, p. 205 (1893).

d. *Dysphania militaris isolata*. — Perak, Sumatra, Borneo.

Dysphania isolata, Warren, Novit. Zool. Vol. 9, p. 351 (1902).
Dysphania militaris var. *adempta*, Bastelberger, Stett. Ent. Zeit. Vol. 66, p. 222 (1905) (ab.) nov. syn.).

e. *Dysphania militaris jessica* (bon. sp.?). — Nicobars, Andamans, Burma.

Dysphania jessica, Swinhoe, Ann. Mag. Nat. Hist. (8), Vol. 1, p. 67 (1908).

33. *D. scyllea* (Swinhoe) (præc. var. vel ab.?). — India.

Euschema scyllea, Swinhoe, Ann. Mag. Nat. Hist. (6), Vol. 12, p. 148 (1893).
Dysphania scyllea, Swinhoe, Lep. Het. Oxford Mus. Vol. 2, p. 380 (1900).

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1) It is by no means impossible that this and the two or three following are also forms of one protean species (*poryi*); but we have seen extremely little material.

34. *D. excubitor* (Moore) (sequ. form. ?). Burma (montic.).

a. *Dysphania excubitor excubitor*.

Euschema excubitor, Moore, Proc. Zool. Soc. Lond. p. 846 (1878).

Dysphania excubitor, Swinhoe, Lep. Het. Oxford Mus. Vol. 2, p. 379 (1900).

b. *Dysphania excubitor sodalis* (vix diff. ?). Burma.

Euschema sodalis, Moore, Journ. Asiat. Soc. Bengal, Vol. 55 (2), p. 90 (1886).

Dysphania sodalis, Bastelberger, Jahrb. Nassau. Ver. Nat. Vol. 60, p. 74 (1907).

c. *Dysphania excubitor fannitta*. Nias, Sumatra.

Dysphania fannitta, Swinhoe, Ann. Mag. Nat. Hist. (8), Vol. 1, p. 67 (1908).

35. *D. subrepleta* (Walker). Borneo, Malacca, Sumatra.

Euschema subrepleta, Walker, List Lep. Ins. Brit. Mus. Vol. 2, p. 406 (1854).

Hazis bellonaria, Guenée, Spec. Gén. Lép. Vol. 10, p. 193, t. 15, f. 1 (1858).

Dysphania subrepleta, Swinhoe, Lep. Het. Oxford Mus. Vol. 2, p. 380 (1900).

36. *D. bellona* (Walker). India to Burma.

Euschema bellona, Walker, List Lep. Ins. Brit. Mus. Vol. 2, p. 405 (1854).

Euschema roepstorffi, Moore, Proc. Zool. Soc. Lond. p. 600 (1877) (var. ?).

Euschema lunulata, Butler, Ann. Mag. Nat. Hist. (5), Vol. 10, p. 375 (1882) (ab.).

Euschema ludifica, Swinhoe, Trans. Ent. Soc. Lond. p. 202 (1890) (ab. ?).

Dysphania bellona, Swinhoe, Lep. Het. Oxford Mus. Vol. 2, p. 380 (1900).

37. *D. caeruleoplaga*, Bastelberger. Andamans.

Dysphania caeruleoplaga, Bastelberger, Intern. Ent. Zeit. Guben, Vol. 5, p. 54 (1911).

38. *D. andersonii* (Moore) (præc. var. ?). Lower Burma.

Euschema andersonii, Moore, Journ. Linn. Soc. Lond. Zool. Vol. 21, p. 56 (1886).

39. *D. plena* (Walker). Philippines.

Euschema plena, Walker, List Lep. Ins. Brit. Mus. Vol. 7, p. 1668 (1850).

? *Hazis manillaria*, Guenée, Spec. Gén. Lép. Vol. 10, p. 192 (1858).

Hazis kalistaria, Guenée, ibidem, p. 192 (1858).

Euschema bellonaria, Dewitz, Nova Acta Acad. Leop. d. Naturf. Halle, Vol. 44 (2), p. 267, t. 9, f. 10-10*b* (1882) (nec Guenée).

Dysphania manillaria, Semper, Reisen Philipp. (2), Vol. 6 (5), t. U, f. 14, 15 (1901).

Dysphania plena, Semper, ibidem, (6), p. 635, t. 65, f. 8 (1902).

40. *D. doubledayi* (Snellen). Malaysia.

Euschema malayanus, Walker, List Lep. Ins. Brit. Mus. Vol. 2, p. 407 (1854) (nec Guérin).

Hazis malayaria, Guenée, Spec. Gén. Lép. Vol. 10, p. 189 (1858).

Hazis doubledayi, Snellen, Tijdschr. v. Ent. Vol. 27, p. 83, 97 (1884).

Dysphania malayaria, Swinhoe, Lep. Het. Oxford Mus. Vol. 2, p. 361 (1900).

Euschema malayaria var. *paupera*, Thierry-Mieg, Le Naturaliste Vol. 27, p. 181 (1905) (ab.) [1].

Dysphania sericata, Bastelberger, Stett. Ent. Zeit. Vol. 66, p. 210 (1905) (ab.; ead. ac præc.).

Euschema angulata, Warren, MS. (in coll. Brit. Mus.) (ab.; ead. ac præc.).

Dysphania doubledayi ab. *affluens*, Bastelberger, Stett. Ent. Zeit. Vol. 66, p. 205 (1905) (ab.).

Euschema aurilunulata, Warren, MS. (in coll. Brit. Mus.).

41. *D. nigrostriata*, Bastelberger (præc. ab. ?). Borneo.

Dysphania nigrostriata, Bastelberger, Stett. Ent. Zeit. Vol. 66, p. 211 (1905).

42. *D. transducta* (Walker) (*doubledayi* form. ?). Borneo, Penang, Sumatra.

Euschema transducta, Walker, Journ. Linn. Soc. Lond. Zool. Vol. 6, p. 94 (1861).

Euschema aurifusa, Warren, MS. (in coll. Brit. Mus.).

43. **D. albescens, nov. sp.** [2]). Prout. Borneo.

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1) In case this form, which is certainly recurrent in Sumatra, should prove to constitute a local or seasonal race, it may be pointed out that Thierry-Mieg's name of *paupera* (August, 1905) has three months' priority over Bastelberger's of *sericata* (November, 1905).

2) **Dysphania albescens, nov. sp.** — ♀, 72 mm. Like *transducta*, Walker, of which it may even prove an extraordinary aberration, but with the forewing white, only slightly clouded with bluish from basal part of M^2 to SM^2, *i. e.* in the middle of the interrupted antemedian band, a small yellow mark at tornus (bounded by submarginal and marginal bands and by submedian fold), hindwing white as far as the postmedian line, golden-yellow distally thereto; dark markings in both wings exactly as in the less heavily marked examples of *transducta*, the streak from antemedian line anterior to SM^2 rather large and strong, as in normal *doubledayi*. Underside similar, but with heavier blotch between base of M^2 and SM^2 of forewing. Abdomen white, belted dorsally with light reddish brown, marked anally with yellowish and purple-grey, and with a yellow lateral line. Sarawak, 4th mile, Rock Road, 7 April, 1910. Type in coll. Brit. Mus., presented by the Sarawak Museum.

44. *D. azurea*, Bastelberger. — N. Borneo.
Dysphania azurea, Bastelberger, Intern. Ent. Zeit. Guben. Vol. 18, p. 115 (1905).

45. *D. cancellata*, Bastelberger. — N. Borneo.
Dysphania cancellata, Bastelberger, ibidem, p. 116 (1905).

46. *D. nelera* (Swinhoe). — S. India.
Euschema malayana, Swinhoe, Proc. Zool. Soc. Lond. p. 865 (1885) (nec Guerin).
Euschema nelera, Swinhoe, Trans. Ent. Soc. Lond. p. 141 (1891).
Dysphania nelera, Swinhoe, Lep. Het. Oxford Mus. Vol. 2, p. 381 (1900).

47. *D. palmyra* (Stoll). — S. India, Ceylon.
Phalaena Bombyx palmyra, Stoll, Suppl. Pap. Exot. Cramer, p. 159, 184 [in err. 384], t. 36, f. 1 (1790).
Euschema palmyra, Hübner, Verz. bek. Schmett. p. 175 (1826?).
Phalaena (?) palmyra, Verloren, Ins. Lep. Crameri, p. 167 (1837).
Cystidia (?) palmyra, Walker, List Lep. Ins. Brit. Mus. Vol. 2, p. 342 (1854).
Euschema transversa, Walker, ibidem, p. 407 (1854).
Hazis palmyraria, Guenée, Spec. Gén. Lep. Vol. 10, p. 190 (1858).
Dysphania palmyra, Swinhoe, Lep. Het. Oxford Mus. Vol. 2, p. 381 (1900).

48. *D. percota* (Swinhoe). — S. India, Burma.
Euschema palmyra, Swinhoe, Proc. Zool. Soc. Lond. p. 864 (1885) (nec Stoll).
Euschema percota, Swinhoe, Trans. Ent. Soc. Lond. p. 142 (1891).

49. *D. malayanus* (Guérin). — Malacca, Singapore.
Hazis malayanus, Guerin, in Delessert, Voy. dans l'Inde (2), p. 89, t. 23, f. 2 (1843).
Dysphania malayanus, Bastelberger, Stett. Ent. Zeit. Vol. 66, p. 201 (1905).

50. *D. recessa* (Walker) (præc. form.?). — Borneo, Perak, Sumatra, N. India.
Euschema recessa, Walker, Journ. Linn. Soc. Lond. Zool. Vol. 6, p. 95 (1861).
Euschema proba, Butler, Ann. Mag. Nat. Hist. (5), Vol. 6, p. 120 (1880); Ill. Het. Coll. Brit. Mus. Vol. 6, p. 48, t. 113, f. 2 (1886).
Dysphania supergressa, Warren, Novit. Zool. Vol. 2, p. 87 (1895) (ab.).
Dysphania recessa, Swinhoe, Lep. Het. Oxford Mus. Vol. 2, p. 380 (1900).
Dysphania malayanus, Semper, Reisen Philipp. (2), Vol. 6, p. 630 (1902) (nec Guerin).
Dysphania malayanus part., Bastelberger, Stett. Ent. Zeit. Vol. 66, p. 201 (1905).
Euschema recessa var. *lutecomaculata*, Grunberg, Sitzungsber. Berl. Ges. Nat. Freunde, p. 287 (1908).

51. *D. minervaria* (Guenée). — Java, Burma, Siam.
Hazis minervaria, Guenée, Spec. Gen. Lep. Vol. 10, p. 190 (1858).
Hazis pugnataria, Guenée, ibidem, p. 194 (1858).
Euschema horsfieldi, Moore, Cat. Lep. E. Ind. House. Vol. 2, p. 334, t. 8A, f. 7 (1859).
Euschema patula, Walker, List Lep. Ins. Brit. Mus. Vol. 31, p. 175 (1864).

52. *D. aurilimbata* (Moore).
Euschema aurilimbata, Moore, Proc. Zool. Soc. Lond. p. 846 (1878).

53. *D. auriplaga*, Warren. — Perak.
Dysphania auriplaga, Warren, Novit. Zool. Vol. 2, p. 85 (1895).

54. *D. flavidiscalis*, Warren. — Burma.
Dysphania flavidiscalis, Warren, Novit. Zool. Vol. 2, p. 86 (1895).
Euschema flavidiscalis, Hampson, Fauna Ind. Moths, Vol. 4, p. 564 (1900).

55. *D. auroguttata*, Warren. — Sula Islands.
Dysphania auroguttata, Warren, Novit. Zool. Vol. 9, p. 340 (1902).

56. *D. discalis* (Walker). — Malay Peninsula, Borneo, Sumatra.
Euschema discalis, Walker, List Lep. Ins. Brit. Mus. Vol. 2, p. 407 (1854).

57. *D. prunicolor* (Moore). — Ceylon.
Euschema subreflata (part.), Walker, List Lep. Ins. Brit. Mus. Vol. 2, p. 406 (1854) (nec typ.).
Euschema prunicolor, Moore, Proc. Zool. Soc. Lond. p. 414 (1879).
Euschema bellissima, Moore, ibidem, p. 414 (1879) (ab.) [1].

1) It is most unfortunate that Hampson *Fauna Ind. Moths*, Vol. 3, p. 460, who is the first to unite these two names, has chosen that of *prunicolor*, which represents the much rarer form, and has not even the virtue that is supposed to attach to « page-priority ». But according to the laws of nomenclature, his selection must stand.

58. *D. conspicua*, Bastelberger. — Khasis.
Dysphania conspicua, Bastelberger, Jahrb. Nassau. Ver. Nat. Vol. 60, p. 73 (1907).

59. *D. ares* (Weymer). — Nias.
Euschema ares (Maassen MS.), Weymer, Stett. Ent. Zeit. Vol. 46, p. 279, t. 2, f. 9 (1885).
Euschema electra, Weymer, ibidem, p. 281 (1885).
Dysphania semiflava, Warren, Novit. Zool. Vol. 2, p. 87 (1895).
Dysphania ares, Bastelberger, Stett. Ent. Zeit. Vol. 66, p. 218 (1905).

60. *D. palestraria* (Guenée). — Java, Timor.
Hazis palestraria (Boisduval MS.), Guenee, Spec. Gén. Lép. Vol. 10, p. 191 (1858).
Heleona cuprina, Felder, Reise Novara, Lep. Het. t. 104, f. 3 (1874).
Euschema palestraria, Thierry-Mieg, Le Naturaliste, Vol. 29, p. 175 (1907).

61. *D. fruhstorferi* (Röber) (præc. ab. ?). — Java.
Euschema fruhstorferi, Röber, Ent. Nachr. Vol. 21, p. 34 (1895).

62. *D. interrupta*, Bastelberger (*palestraria* var.?). — Sumatra.
Dysphania interrupta, Bastelberger, Stett. Ent. Zeit. Vol. 66, p. 206 (1905).
Euschema sumatrensis, Fawcett, Proc. Zool. Soc. Lond. 1909, p. 882, t. 82, f. 6 (1910) (ab.) (nov. syn.).

63. **D. bivexillata, nov. sp.** [1]), Prout. — Sumatra.

SECTION II. — ♂ hindtibia not dilated;
♂ abdomen not woolly-haired beneath [2]) (*Pareuschema*, Thierry-Mieg).

64. *D. glaucescens* (Walker). — Malay Peninsula, Borneo.
Euschema glaucescens, Walker, Journ. Linn. Soc. Lond. Zool. Vol. 6, p. 93 (1861).
Euschema regalis, Butler, Ann. Mag. Nat. Hist. (5), Vol. 6, p. 119 (1880).
Dysphania glaucescens, Swinhoe, Lep. Het. Oxford Mus. Vol. 2, p. 381 (1900).
Pareuschema regalis, Thierry-Mieg, Le Naturaliste, Vol. 27, p. 181 (1905).

NOTE. — *Euschema resumpta*, Walker = *semiplena*, Walker, belongs to the *Chalcosiinae*; *E. flavescens*, Walker, to the genus *Chatalma* (Uraniid). *Hazis agorius*, Boisduval, *Fauna Ent. Pacif.* Vol. 1, p. 204, t. 5, f. 1, is unknown to us, but evidently not a *Dysphania*; Butler (MS.) in coll. Brit. Mus. referred it to *Praesos*, Walker. *Phalaena papilionaria*, Drury, *Ill. Nat. Hist.* Vol. 2, referred to *Heleona* in Westwood's edition, is a well-known Chalcosime (genus *Cyclosia*).

27. GENUS CUSUMA, MOORE

Cusuma. Moore, Proc. Zool. Soc. Lond. p. 415 (1879).

Characters. — Face scarcely protuberant, densely scaled. Palpus moderate, stout, second joint rough-scaled, third joint smooth-scaled, moderate, slightly longer in ♀. Tongue developed. Antenna not quite one-half, bipectinate to apex, in ♂ with moderate, in ♀ with slightly shorter

1) **Dysphania bivexillata, nov. sp.** — ♀, 64 mm. Head, with palpus and antennal shaft, light fleshy brown, crown marked with bright yellow. Body of the same fleshy brown, marked on sides and dorsally with bright yellow, this colour forming on the abdomen rather narrow belts at the ends of the segments. Forewing rather broad, termen not extremely convex (shape approaching that of *Cusuma*); nondescript fleshy brown, with purple reflections, stronger in certain lights — and with vague suggestions of a paler subterminal band, oblique outwards from costa, strongly retracted from R^3; costal margin also paler; a bright deep yellow streak along SC from base to about 5 mm.; a rather narrow, sinuous band across cell near its end, continued shortly and weakly into the space between M^1 and M^2; a second narrow band, much constricted in middle and even interrupted by vein R^5, running from SC just beyond cell to M^1; a slight, vague yellow mark in middle of submedian area; hindwing bright deep yellow, marked with purplish brown, the markings consisting of a rather large oval cell-mark, and postmedian and subterminal bands formed much as in *plena*, Walker, etc., but meeting in a rather large tornal blotch. Underside similar. Sumatra (Crowley Bequest). Type in coll. Brit. Mus. The ground-colour is possibly faded from more purplish, but the markings are quite distinct from any species known to us.

2) Fide Thierry-Mieg, who founds the genus *Pareuschema* on these characters. We have only seen the ♀ of *glaucescens*.

branches. Pectus densely hairy. Femora hairy. Hindtibia in ♂ dilated with hair-pencil, in both sexes with all spurs. Abdomen not crested, in ♂ densely woolly-haired beneath, and sometimes laterally. Frenulum fully developed. Forewing less elongate than in *Dysphania*, costa slightly arched, apex moderate, termen smooth, slightly convex anteriorly, then nearly straight, very oblique, tornus rounded, cell almost one-half, DC^2 vertical, DC^3 deeply inbent, SC^1 free, $SC^{2\text{-}5}$ stalked, R^1 long-stalked with them, R^2 from considerably above middle of DC, M^1 well separate; hindwing with apex rounded, termen waved, cell less than one-half, DC^3 gently curved, C approximated to cell to rather less than one-half, rather rapidly diverging, SC^2 separate, R^2 from near R^1, M^1 well separate. Fovea present in forewing, but less strongly developed than in *Dysphania*.

Early stages unknown.

Scarcely more than a subgenus of *Dysphania*, with less elongate wings, less developed fovea, rather shorter cell to hindwing, etc.

Type of the genus: *Cusuma vilis* (Walker) = *Euschema vilis*, Walker = *Cusuma limbata*, Moore (1879).

Geographical distribution of species. — Ceylon.

1. *C. vilis* (Walker). — Ceylon.
   Euschema vilis, Walker, List Lep. Ins. Brit. Mus. Vol. 2, p. 408 (1854).
   Cusuma limbata, Moore, Proc. Zool. Soc. p. 415 (1879).
   Cusuma vilis, Moore, ibidem, p. 415 (1879).
2. *C. flavifusa*, Hampson. — **Pl. 2, Fig. 1.** — Ceylon.
   Cusuma flavifusa, Hampson, Ill. Het. Coll. Brit. Mus. Vol. 9, p. 144, t. 168, f. 17 (1895).
   Euschema flavifusa, Hampson, Fauna Ind. Moths, Vol. 3, p. 471 (1895).

Group IV

28. Genus AGOSCHEMA, nov. nom., Prout

Agoschema, nov. nom. Prout.
Dysschema. Warren, Novit. Zool. Vol. 5, p. 10 (1898) (nec Hübner, 1826?).
Microschema. Warren, ibidem, Vol. 10, p. 349 (1903) (nec Stal, 1860).

Characters. — Face slightly protuberant, with appressed scales. Palpus moderate to longish, rather strong, second joint shortly rough-scaled, third joint smooth, in ♂ rather short, in ♀ elongate. Tongue developed. Antenna in ♂ bipectinate to about two-thirds, with shortish, moderately stout branches, apex simple; in ♀ nearly simple, minutely ciliated. Pectus and femora slightly hairy. Hindtibia in ♂ dilated with hair-pencil, in both sexes with all spurs. Abdomen not crested. Frenulum developed [1]. Forewing with costa nearly straight proximally, arched distally, apex not acute, termen curved, oblique, cell less than one-half, DC slightly incurved, becoming moderately oblique, SC^1 from cell, free, or anastomosing at a point with C, SC^2 rather long-stalked with $SC^{3\text{-}5}$, R^1 short-stalked, R^2 from considerably above middle of DC, M^1 separate; hindwing with apex rounded, termen convex, somewhat gibbous in middle, tornus pronounced, cell short, DC^3 moderately oblique, C shortly approximated to cell near base (sometimes with anastomosis at a point), then very rapidly diverging, SC^2 stalked, R^2 from close to R^1, M^1 connate with $R^{2\text{-}5}$.

1) We have seen no good [illegible], but as the hindwing is without appreciable basal expansion, we [illegible] it will be present

Early stages unknown.

Warren refers the genus to the *Dysphaniinae* (our Group III), but it has no fovea, and differs in several other particulars. The condition of vein C of the hindwing, the stalking of SC^2 and the *possible* weakness of the ♀ frenulum may even be indications of a higher position than we have assigned it.

Type of the genus : *Agoschema goniata* (Warren) = *Dysschema goniata*, Warren [1898].

Geographical distribution of species. — New Guinea.

1. *A. goniata* (Warren). — **Pl. 2, Fig. 3.** Dutch and British New Guinea.
Dysschema goniata, Warren, Novit. Zool. Vol. 5, p. 10 (1898).
Microschema goniata, Warren, ibidem, Vol. 10, p. 349 (1903).

29. Genus ŒNOCHLORA, Warren

Œnochlora. Warren, Novit. Zool. Vol. 3, p. 353 (1896).
Euarestus. Lucas, Proc. Roy. Soc. Queensl. Vol. 15, p. 142 (1900).

Characters. — Face scarcely protuberant, smoothly scaled. Palpus moderate, rather stout, second joint scarcely rough-scaled, third joint short, distinct, blunt. Tongue developed. Antenna long, in ♂ bipectinate almost to apex, in ♀ serrate. Pectus hairy. Femora somewhat hairy. Hindtibia with all spurs, in ♂ dilated with hair-pencil. Abdomen not crested. Frenulum fully developed. Forewing with costa strongly arched in basal half, apex moderately acute, termen slightly ventricose posteriorly, tornus rounded, cell less than one-half, discocellulars oblique, curved, especially DC^3, SC^1 from cell, anastomosing shortly with C and rather strongly with SC^2, SC^2 from stalk of SC^{3-5}, R^1 separate, R^2 about central, M^1 well separate from R^3; hindwing with apex and termen rounded, inner margin rather long, anal angle pronounced, C appressed to SC to fully one-half of cell, SC^2 and R^1 separate, R^2 from a little nearer to R^1 than to R^3, M^1 well separate from R^3.

Early stages unknown.

Turner (*Proc. Linn. Soc. N. S. Wales*, Vol. 35, p. 644) considers this genus quite nearly related to the *Terpna*-group. This may possibly be correct, but as its exact position is by no means certain, we have considered that for taxonomic purposes it was more convenient to place it at the head of our Group IV.

Type of the genus : *Œnochlora imperialis*, Warren (1896).

Geographical distribution of species. — Australian.

1. *Œ. imperialis*, Warren. — **Pl. 2, Fig. 4.** Queensland, British New Guinea.
Œnochlora imperialis, Warren, Novit. Zool. Vol. 3, p. 354 (1896).
Euarestus nobilitans, Lucas, Proc. Roy. Soc. Queensl. Vol. 15, p. 142 (1900).
Euarestus patrocinatus, Lucas, ibidem, p. 142 (1900).

30. Genus AGATHIA, Guenée

Agathia. Guenée, Spec. Gén. Lép. Vol. 9, p. 388 (1858).

Characters. — Face rounded-prominent, smooth-scaled. Palpus in ♂ moderate, in ♀ long, second joint densely but not very long scaled, third joint smoother, in ♂ quite moderate, in ♀ long to very long. Tongue developed. Antenna over one-half, in both sexes almost simple. Pectus and femora

hairy. Hindtibia in ♂ strongly dilated, with hair-pencil and usually with a rather broad but not long terminal process, in both sexes with all spurs. Abdomen usually somewhat crested, sometimes quite smooth. Frenulum fully developed. Forewing with costa arched, apex usually acute, termen almost smooth or waved, little convex (in some species elbowed at R^3), oblique, cell somewhat less than one-half, DC incurved, SC^1 from cell, nearly always free, very exceptionally anastomosing shortly with C, SC^2 normal. R^1 separate, R^2 normal, M^1 separate: hindwing with apex usually rounded, termen irregular, strongly tailed at R^3 and slightly or rather strongly at R^1, tornus somewhat produced, cell less than one-half, DC^3 incurved, C closely approximated to cell for some distance, occasionally with short fusion basad, SC^2 approximated to R^1, R^2 very characteristic, M^1 separate. ♂ genitalia with uncus bifurcate, gnathos with broad hp, harpe angulated, penis pestillate, coremata present.

Larva. — Moderately stout, with slight protuberances on prothorax and eighth abdominal, green in colour; feeding on species of *Nerium*, etc. (Moore, *Lep. Ceyl.* Vol. 3, p. 437, t. 197, f. 1*b*, etc.).

Pupa. — Rather slender, segmental incisions, eyes and spiracles well marked, form cylindrical, regularly tapering, abdomen light brown, black-spotted, a supra-anal plate and eight terminal hooks.

Except in the curious variability of the crests, this genus exhibits remarkable uniformity of structure. As with most large genera where this is the case, a more thorough revision is needed than the scope of the present work admitted; we have done little more than catalogue the described forms. They exhibit well-marked sexual dimorphism.

Type of the genus : *Agathia lycaenaria* (Kollar) = *Geometra lycaenaria*, Kollar (Moore sel., 1887).

Geographical distribution of species. — Indo-Australian, straggling into the Palæarctic and Æthiopian Regions.

1. *A. lycaenaria* (Kollar). — India and S. China to Java and Philippines.
   Geometra lycaenaria, Kollar, Hügel's Kashmir, Vol. 4, p. 486 (1844).
   Geometra albiangularia, Herrich-Schaffer, Samml. Aussereur. Schmett. Vol. 1, t. 91, f. 330 (1855).
   Agathia lycaenaria, Guenée, Spec. Gén. Lép. Vol. 9, p. 380, t. 3, f. 12 (1858).
   Agathia discriminata, Walker, List Lep. Ins. Brit. Mus. Vol. 22, p. 591 (1861).
2. *A. laetata* (Fabricius). — India with Ceylon, Malay Peninsula.
   Phalaena laetata, Fabricius, Ent. Syst. Vol. 3 (2), p. 164 (1794).
   ?*Phalaena zonaria*, Donovan, Ins. China, t. [44], f. ** (1799) [1].
   ?*Hipparchus zonarius*, Westwood, Donovan's Ins. China, nov. ed. p. 81, t. 44, f. 2 (1842).
   Agathia laetata, Guenee, Spec. Gén. Lép. Vol. 9, p. 381 (1858).
   Agathia catenaria, Walker, List Lep. Ins. Brit. Mus. Vol. 22, p. 590 (1861).
3. *A. hemithearia*, Guenée. — India with Ceylon.
   Agathia hemithearia, Guenee, Spec. Gen. Lép. Vol. 9, p. 381 (1858).
4. *A. hilarata*, Guenée. — India, Borneo, ? Fergusson Isl.
   Agathia hilarata, Guence, Spec. Gén. Lép. Vol. 9, p. 381 (1858).
   Agathia quinaria, Moore, Proc. Zool. Soc. Lond. p. 630 (1867); Waterhouse, Aid, Vol. 2, t. 184, f. 2 (1880).
   Agathia prasina, Swinhoe, Ann. Mag. Nat. Hist. (6), Vol. 12, p. 219 (1893).
5. *A. intercissa*, Walker. — S. India, Ceylon.
   Agathia intercissa, Walker, List Lep. Ins. Brit. Mus. Vol. 22, p. 592 (1861); Hampson, Ill. Het. Coll. Brit. Mus. Vol. 9, p. 146, t. 170, f. 3 (1893).
6. *A. arcuata*, Moore. — N. India.
   Agathia arcuata, Moore, Proc. Zool. Soc. Lond. p. 640 (1867); Waterhouse, Aid, Vol. 2, t. 184, f. 3 (1889).

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1) As this species is unknown from China, whence Donovan's specimen purported to come, the synonym cannot be regarded as absolutely certain. But even if the figure could be proved to represent a remarkable aberration of *carissima*, Butler, the name of *zonaria* could not be applied, being a homonym.

7. *A. carissima*, Butler. — Eastern Asia.
Agathia carissima, Butler, Ill. Het. Coll. Brit. Mus. Vol. 2, p. 50, t. 36. f. 7 (1878).
Agathia lacunaria, Hedemann, Hor. Soc. Ent. Ross. Vol. 14, p. 512, t. 3, f. 4 (1879).
Agathia laetata, Leech, Ann. Mag. Nat. Hist. (6), Vol. 20, p. 231 (1897) (nec Fabricius).

8. *A. magnifica*, Moore. — Ceylon.
Agathia magnifica, Moore, Proc. Zool. Soc. Lond. p. 416 (1879).

9. *A. gigantea*, Butler. — N. India to Java.
Agathia gigantea. Butler, Ann. Mag. Nat. Hist. (5), Vol. 6, p. 217 (1880).
Agathia diversiformis, Warren, Novit. Zool. Vol. 1, p. 388 (1894).

10. *A. visenda*, Butler. — Darjiling.
Agathia visenda, Butler, Ann. Mag. Nat. Hist. (5), Vol. 6, p. 218 (1880).

11. *A. beata*, Butler. — N. India.
Agathia beata, Butler, Ann. Mag. Nat. Hist. (5), Vol. 6, p. 218 (1880).

12. *A. subdeleta*, Warren (præc. form.?). — N. India.
Agathia subdeleta, Warren, Novit. Zool. Vol. 3, p. 102 (1896).

13. *A. pisina*, Butler. — **Pl. 2, Fig. 2.** — New Guinea to Solomons.
Agathia pisina, Butler, Ann. Mag. Nat. Hist. (5), Vol. 20, p. 243 (1887).
Agathia subcarnea, Warren, Novit. Zool. Vol. 3, p. 285 (1896).

14. *A. asterias*, Meyrick. — N. to E. Australia.
Agathia asterias, Meyrick, Proc. Linn. Soc. N. S. Wales (2), Vol. 2, p. 899 (1888).

15. *A. prasinaspis*, Meyrick (*laetata* var.?) — New Guinea to E. Australia.
Agathia prasinaspis, Meyrick, Trans. Ent. Soc. Lond. p. 495 (1889).
? *Agathia laetata*, Lucas, Proc. Linn. Soc. N. S. Wales (2), Vol. 4, p. 1094 (1890) (nec Fabricius).
Agathia veneranda, Swinhoe, Trans. Ent. Soc. Lond. p. 670 (1902) (nov. syn.).

16. *A. iodioides*, Lucas. — Queensland.
Agathia iodioides, Lucas, Proc. Linn. Soc. N. S. Wales (2), Vol. 6, p. 296 (1891).

17. *A. distributa*, Lucas. — Queensland.
Agathia distributa, Lucas, Proc. Linn. Soc. N. S. Wales (2), Vol. 6, p. 296 (1891).
Agathia disconnecta, Warren, Novit. Zool. Vol. 3, p. 362 (1896) (nov. syn.).

18. *A. codina*, Swinhoe. — Assam, Borneo.
Agathia codina, Swinhoe, Trans. Ent. Soc. Lond. p. 7, t. 1, f. 3 (1892).

19. *A. gemma*, Swinhoe. — Khásis.
Agathia gemma, Swinhoe, Trans. Ent. Soc. Lond. p. 8 (1892).

20. *A. diversilinea*, Warren.
a. *Agathia diversilinea diversilinea*. — Fergusson Isl., Trobriands, Louisiades, ? Ke Islands.
Agathia diversilinea, Warren, Novit. Zool. Vol. 3, p. 282 (1896).
b. **Agathia diversilinea ampla, nov. subsp.** [1], Prout. — Dutch New Guinea.

21. *A. rubrilineata*, Warren. — Java, Borneo.
Agathia rubrilineata, Warren, Novit. Zool. Vol. 3, p. 362 (1896).

22. *A. obsoleta*, Warren. — Java, Borneo.
Agathia obsoleta, Warren, Novit. Zool. Vol. 4, p. 208, t 5, f. 4 (1897).

23. *A. succedanea*, Warren. — Borneo.
Agathia succedanea, Warren, Novit. Zool. Vol. 4, p. 388 (1897).

24. *A. kühni*, Warren. — Ke Islands.
Agathia kühni, Warren, Novit. Zool. Vol. 5, p. 422, 425 (1898).

25. *A. exquisita*, Warren. — Great Oby.
Agathia exquisita, Warren, Novit. Zool. Vol. 6, p. 20 (1899).

26. *A. punctata*, Warren. — Dammer Islands.
Agathia punctata, Warren, Novit. Zool. Vol. 6, p. 327 (1899).

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1) **Agathia diversilinea ampla, nov. subsp.** — ♂, 46 mm. All the dark margins much broader than in typical *diversilinea*, the median and subterminal brown bands of forewing consequently not interrupted, but merely constricted at points where in the type form they give place to the fine yellow lines; subterminal band connected with terminal by a ray along R^3, enclosing a round spot between R^3 and M^1. Fak-Fak, Dutch New Guinea, 1700 feet, Dec. 1907 (A. E. Pratt). Type in coll. L. B. Prout. Cotypes from the same locality in coll. Brit. Mus. et coll. W. F. H. Rosenberg.

27. *A. conjunctiva*, Warren — British New Guinea.
Agathia conjunctiva, Warren, Novit. Zool. Vol. 10, p. 353 (1903).

28. *A. obnubilata*, Warren. — British New Guinea.
Agathia obnubilata, Warren, Novit. Zool. Vol. 10, p. 353 (1903).

29. *A. ithearia*, Swinhoe. — Borneo.
Agathia ithearia, Swinhoe, Ann. Mag. Nat. Hist. (7), Vol. 15, p. 166 (1905).

30. *A. solaria*, Swinhoe. — Singapore.
Agathia solaria, Swinhoe, Ann. Mag. Nat. Hist. (7), Vol. 15, p. 167 (1905).

31. *A. olivacea*, Warren. — Choiseul.
Agathia olivacea, Warren, Novit. Zool. Vol. 12, p. 420 (1905).

32. *A. dimota*, Prout. — Fiji.
Agathia dimota, Prout, The Entomologist, Vol. 44, p. 20 (1911).

33. *A. lycaenidia*, Bastelberger. — New Pomerania.
Agathia lycaenidia, Bastelberger, Intern. Ent. Zeit. Guben, Vol. 5, p. 53 (1911).

34. *A. albipunctulata*, Bastelberger. — Bismarck Archipelago.
Agathia albipunctulata, Bastelberger, Intern. Ent. Zeit. Guben, Vol. 5, p. 53 (1911).

35. **A. discisticta, nov. sp.** 1), Prout. — Sylhet.

36. **A. maculimargo, nov. sp.** 2), Prout. — Amboina.

37. **A. laqueifera, nov. sp.** 3), Prout. — Assam to Java.

38. *A. contuscata*, Warren. — Sierra Leone.
Agathia contuscata, Warren, Novit. Zool. Vol. 4, p. 32 (1897).

39. *A. multiscripta*, Warren. — Niger Coast to Cameroons.
Agathia multiscripta, Warren, Novit. Zool. Vol. 5, p. 233 (1898).

40. *A. pauper*, Warren. — Niger Coast.
Agathia pauper, Warren, Novit. Zool. Vol. 11, p. 403 (1904).

41. *A. elenaria*, Swinhoe. — Niger Coast to Cameroons.
Agathia elenaria Swinhoe, Trans. Ent. Soc. Lond. p. 542 (1904).

42. *A. minuta*, Druce. — Cameroons.
Agathia minuta, Druce, Ann. Mag. Nat. Hist. (8), Vol. 7, p. 202 (1911).

1) **Agathia discisticta, nov. sp.** ♂, 40 mm. Face and palpus purple-brown above, pale below, vertex and antenna purple-brown, occiput and front of thorax pea-green, thorax posteriorly and abdomen mostly purple-brown (somewhat damaged). Wings shaped as in *gigantea*, Butler. Forewing pea-green, with costa to SC pale purple-brown, an oblique-edged purple-brown basal patch as in *gigantea*, *solaria*, etc., a roundish discal spot fully as large as in *codina*, Swinhoe, vague traces of the median band at inner margin, a subterminal band shaped as in *solaria*, Swinhoe, but slightly broader, terminal markings (including conspicuous dark blotch between R^2 and R^3) as in that species. Hindwing pea-green, with purple-brown patches at base and on inner margin, and with purple-brown terminal band occupying one-half of the wing, its proximal edge irregular, the green ground colour encroaching between R^1 and R^2 and again between R^3 and M^1, its distal edge reaching the termen in tornal half, but enclosing some ill defined terminal green spots, the usual green patch present in apical half; a strongly lunulate-dentate blackish line traverses the terminal band near its proximal edge; cell-spot distinct, though smaller than in forewing. Under surface paler, the markings duller brown, the band on hindwing much narrower towards inner margin, its proximal part being here only faintly shadowed. Discal spots present. S. Sylhet (Crowley Bequest); type in coll. Brit. Mus. Nearly related to *gigantea* and *solaria*, the forewing more resembling the former, the hindwing the latter; the presence of conspicuous discal spots both above and beneath (as in *codina*) is rare in this genus. In the hindwing, R^3 and M^1 are shortly stalked, a still more rare, if not unique occurrence in the genus.

2) **Agathia maculimargo, nov. sp.** ♂, 50 mm. Very like a large, rather yellow green specimen of *distributa*, Lucas, but with the postmedian series of spots, especially on the hindwing, rather further from termen, the inner-marginal on forewing enlarged into a thick oblique streak from the margin to SM^2, termen of forewing with rather large, but well isolated triangular spots at the ends of veins R^2, R^3, M^1, M^2 and SM^2, of almost equal size, only that at R^3 slightly larger and extending across the fringe, a much smaller dark mark at end of R^1; hindwing with inner margin from tornus to postmedian marked with purplish fuscous, most broadly at tornus; fringe from R^1 to tornus clear whitish, only with a dark spot at end of M^1, basal half of abdomen green above, regularly belted with purplish fuscous. Amboina, Oct. 1907 (Pratt); type in coll. Brit. Mus.

3) **Agathia laqueifera, nov. sp.** ♂♀, 26-30 mm. Face, vertex, palpus and antenna pinkish-brown, slightly mixed with whitish, the hairs on underside of palpus whitish, ♂ with third palpal joint shorter than second; occiput green. Thorax and abdomen (except anally) green dorsally, tegulae marked with pinkish-brown, abdominal incisions and crests (which are well developed) pinkish-brown, thorax and abdomen paler beneath. Forewing bright yellow green, costa to SC pinkish-brown, much spotted with fuscous in proximal and distal thirds, the distal sometimes becoming an almost continuous broad fuscous streak; markings pinkish-brown, consisting of: an ill defined basal patch between inner margin and M; a narrow band from costa at two-fifths to inner margin before one-half, starting obliquely outwards, forming an irregular loop enclosing the minute discal dot, more or less outangled again on submedian fold, and again close to inner margin, sometimes connected along inner margin with the postmedian; a postmedian placed and shaped as in *Lophochlora cristivera*, marked with fuscous or reddish fuscous in its anterior part; a conspicuous rounded spot between R^2 and R^4 near termen, almost wholly covered with fuscous scales; several minute dots scattered about the wing, and traces of a fine terminal line; fringe whitish, spotted with pinkish-brown at the vein-ends. Hindwing with the teeth at R^1 and R^3 sharp, almost equal; extreme base pinkish-brown, basal two-fifths otherwise bright yellowish green with minute dusting, terminal three-fifths in the type largely pinkish-brown, leaving a narrow terminal band of green from apex to submedian fold, and some slight green admixture in middle, especially towards inner margin; a black dash or spot on R^2 in the middle of the pinkish-brown area, and others (in the type much fainter) on R^1 and R^3; terminal line pinkish-brown; fringe whitish, bisected by a darker line, and with spots at vein-ends. Underside whitish green, with most of the markings of the upperside traceable in pale pink, a median line or narrow band on hindwing sometimes darker and more prominent. Type (♀), Digboi, Upper Assam, in coll. L. B. Prout; a ♂ from Java (E. India Company) and a ♀ from Singapore (March to April, H. N. Ridley), both in coll. Brit. Mus., have the markings on the hindwing much reduced, especially the ♂, in which there is little more than a zigzag antemedian line, some irregular longitudinal streaks in middle of wing and a rather dense dusting to represent the rest of the brown area.

NOTE. — *Agathia* (?) *divaricata*, Moore. *Lep. Coll. Atkinson*, p. 250, t. 8, f. 15, belongs to the subfamily *Geometrinae (Ennominae*, Warren), and has been made the type of the genus *Trotocraspeda*, Warren, *Novit. Zool.* Vol. 6, p. 66.

31. GENUS PARAGATHIA, WARREN

Paragathia [1]). Warren, Novit. Zool. Vol. 9, p. 495 (1902).

Characters. — Face smooth. Palpus moderate to long, second joint densely scaled, third joint smooth, in ♂ quite moderate, in ♀ long, rather slender. Tongue present. Antenna in both sexes bipectinate, in ♂ with moderate, in ♀ with rather short branches. Pectus hairy. Hindtibia in ♂ not dilated, in both sexes with all spurs. Abdomen weakly crested. Wings shaped and decorated as in *Agathia*. Frenulum fully developed. Forewing with DC deeply incurved, very oblique posteriorly. SC^1 free, SC^2 normal, R^1 separate, M^1 separate; hindwing with DC incurved, oblique posteriorly, C approximated to cell to less than one-half, SC^2 separate, M^1 separate.

Early stages unknown.

Differs chiefly from *Agathia* in the pectinate antennæ of both sexes.

Type of the genus : *Paragathia albimarginata*, Warren (1902).

Geographical distribution of species. — Tropical Africa.

1. *P. albimarginata*, Warren. Delagoa Bay, Congo.

Paragathia albimarginata, Warren, Novit. Zool. Vol. 9, p. 495 (1902).
Agathia delicia, Thierry-Mieg, Le Naturaliste, Vol. 29, p. 150 (1907) (nov. syn.).

32. GENUS LOPHOCHLORA, WARREN

Lophochlora. Warren, Novit. Zool. Vol. 1, p. 389 (1894).

Characters. — Face smooth. Palpus in ♂ moderate, second joint shortly rough-scaled, third joint rather small (in ♀ probably elongate). Tongue present. Antenna in both sexes almost simple. Pectus densely hairy. Hindfemur in ♂ terminally thickened with a tuft of hairs, hindtibia much dilated, with short thick terminal process and strong floccous hair-pencil, all spurs present, terminals rather short, tarsus rather short. Metathorax crested. Abdomen with two tall crests, succeeded by three shorter but thick ones; ♂ with strong tufts of hair from posterior wall of basal cavity, the spine in the cavity very strong. Frenulum fully developed. Forewing somewhat elongate, costa somewhat arched, apex prominent, termen subcrenulate, oblique, very slightly elbowed in middle, DC incurved, fully as oblique anteriorly as posteriorly, SC^1 free, SC^2 normal, R^1 connate or separate, R^2 slightly above middle of DC, M^1 approximated to R^3; hindwing elongate, termen crenulate, strongly toothed at R^1 and R^3, excised between, inner margin long, cell almost one-half, DC rather deeply inbent, oblique posteriorly, C shortly appressed to SC near base, then rapidly diverging, SC^2 connate or separate, R^2 normal, M^1 approximated to R^3.

Early stages unknown.

Another offshoot (scarcely more than a subgenus) of *Agathia*, distinguished by the crested metathorax and the highly developed anterior crests of abdomen..

1 Not preoccupied by *Paragathis*, Ashmead, 1889.

Type of the genus : *Lophochlora cristifera* (Walker) = *Thalera cristifera*, Walker (1894).

Geographical distribution of species. — Borneo, Sumatra.

1. *L. cristifera* (Walker). Borneo.
   Thalera cristifera, Walker, List Lep. Ins. Brit. Mus. Vol. 22, p. 602 (1861).
   Lophochlora cristifera, Warren, Novit. Zool. Vol. 1, p. 389 (1894 ; Swinhoe, Lep. Het. Oxford Mus. Vol. 2, t. 6, f. 5 (1900 .
2. *L. vicina*, Bastelberger. S. E. Sumatra.
   Lobochlora vicina, Bastelberger, Intern. Ent. Zeit. Guben, Vol. 5, p. 53 (1911).

33. Genus CAMPTOLOPHIA, Warren

Camptolophia. Warren, Novit. Zool. Vol. 3, p. 102 (1896).

Characters. — Face obliquely prominent, dense-scaled below. Palpus in ♂ moderate, second joint densely scaled, third joint short, blunt. Tongue developed. Antenna scarcely one-half, in ♂ bipectinate, with quite short, clavate branches. Pectus and femora strongly hairy. Hindtibia with all spurs. Abdomen with three strong dorsal crests, bent backwards terminally. Frenulum fully developed. Forewing broad, costa arched, apex squared, termen crenulate, with slight tooth at R^1 and rather strongly angled at R^3, cell somewhat less than one-half. DC incurved. SC^1 free, though approaching C, SC^2 normal, R^1 just separate, M^1 approximated to R^3; hindwing with termen crenulate, toothed at R^1 and R^3, and minutely at M^1, cell somewhat less than one-half. DC slightly curved, C approximated to cell to almost one-half, SC^2 approximated to R^1, M^1 to R^3, R^2 from near R^1.

Early stages unknown.

Also nearly related to *Agathia*, though somewhat more divergent in shape and pattern than the two preceding genera.

Type of the genus : *Camptolophia marmorata*, Warren (1896).

Geographical distribution of species. — Assam.

1. *C. marmorata*, Warren. Khasis.
   Camptolophia marmorata, Warren, Novit. Zool. Vol. 3, p. 102 (1896).

34. Genus HELICOPAGE, Warren

Helicopage. Warren, Novit. Zool. Vol. 3, p. 106 (1896).

Characters. — Face smooth. Palpus in ♂ long, second joint extending considerably beyond frons, rather slender, but with projecting hairs above and beneath, third joint long, slender, spatulate. Tongue present. Antenna more than one-half, in ♂ bipectinate with shortish branches, apex almost simple. Pectus and femora hairy. Hindtibia in ♂ rather slender, yet with a long, thin hair-pencil, all spurs present. Abdomen slender, not crested. Frenulum fully developed, ♂ retinaculum a long, tough spiral, attached only close to base. Forewing with costa moderately arched, apex moderate, termen somewhat crenulate, little oblique anteriorly, more so posteriorly, cell less than one-half, DC strongly incurved, very oblique posteriorly, SC^1 from cell, anastomosing with, or approximated to C, SC^2 normal (in *cinerea* long-stalked with SC^1, and sometimes anastomosing shortly with SC^{3-4}), R^1 separate, M^1 separate. Hindwing with termen crenulate, a slight tooth at R^1 and a longer one at R^3, cell rather

less than one-half, DC deeply inbent, strongly oblique posteriorly, C separated from SC near base by a fovea-like patch, approximated to SC for second fourth of cell, then rapidly diverging, SC^2 separate, R^2 from close to R^1, M^1 separate.

Early stages unknown.

We have abstained from giving any female characters, being only acquainted with the ♀ in the enigmatical *cinerea*, which is probably *sui generis*.

Type of the genus : *Helicopage hirundinalis*, Warren (1896).

Geographical distribution of species. — Assam, New Guinea.

1. *H. hirundinalis*, Warren. — Khasis.
   Helicopage hirundinalis, Warren, Novit. Zool. Vol. 3, p. 106 (1896).
2. *H. cinerea* (Warren) (huj. gen. ?). — Dutch New Guinea to Louisiades, N. Queensland.
   Agathia cinerea, Warren, Novit. Zool. Vol. 3, p. 284 (1896).
   Helicopage velata, ♀, Warren, ibidem, Vol. 6, p. 330 (1899) (nov. syn.).
3. *H. velata*, Warren (præc. form. ?). — Woodlark, Rossel.
   Helicopage (? *velata*, Warren, Novit. Zool. Vol. 4, p. 390 (1897); Vol. 6, p. 330, pro parte (1899).

35. Genus DOOABIA, Warren

Dooabia. Warren, Novit. Zool. Vol. 1, p. 388 (1894).
Cacamoda. Swinhoe, Trans. Ent. Soc. Lond. p. 172 (1894) 1).
Anisodontodes. Warren MS. (in coll. Brit. Mus.).

Characters. — Face scarcely protuberant, smooth-scaled. Palpus with second joint thickly scaled, reaching beyond frons, longer in ♀ than in ♂, third joint smooth-scaled, in ♂ quite moderate, in ♀ long. Tongue developed. Antenna in ♂ minutely ciliated, in ♀ virtually simple. Pectus and femora somewhat hairy. Hindtibia in ♂ dilated, with hair-pencil and short terminal process, in both sexes with all spurs. Abdomen not crested. Frenulum fully developed. Forewing with costa arched, apex acute, termen somewhat waved, angled at R^3, cell rather short, DC deeply inbent, SC^1 from cell, closely approaching C (perhaps sometimes anastomosing), SC^2 normal, R^1 connate, R^2 from above middle of DC, M^1 separate; hindwing with termen subcrenulate, tailed at R^3, cell rather short, DC inbent, strongly oblique posteriorly, C shortly approximated to SC, then rapidly diverging, SC^2 separate, M^1 separate.

Early stages unknown.

Type of the genus : *Dooabia viridata* (Moore) = *Ennomos viridata*, Moore (1894).

Geographical distribution of species. — India, Formosa.

1. *D. viridata* (Moore). — N. India, Formosa.
   Ennomos viridata, Moore, Proc. Zool. Soc. Lond. p. 623 (1867); Waterhouse, Aid, Vol. 2, t. 184, f. 4 (1889).
   Dooabia viridata, Warren, Novit. Zool. Vol. 1, p. 388 (1894).
   Cacamoda viridata, Swinhoe, Trans. Ent. Soc. Lond. p. 172 (1894).
   Chlorodontopera viridata, Hampson, Fauna Ind. Moths, Vol. 3, p. 483 (1895).
2. *D. lunifera* (Moore). — Assam.
   Thalassodes lunifera, Moore, Lep. Coll. Atkinson, p. 250 (1888).
   Euchloris lunifera, Swinhoe, Trans. Ent. Soc. Lond. p. 174 (1894).

1) Warren's paper was published in April, Swinhoe's (although dated April) not until well on in May.

36. Genus EUXENA, Warren

Euxena 1). Warren, Novit. Zool. Vol. 3, p. 365 (1896).

Characters. — Face smooth. Palpus moderate, rather stout, second joint rough-scaled, third joint in ♂ small. Tongue developed. Antenna in ♂ almost simple 2). Pectus and femora hairy. Hindtibia in ♂ dilated with hair-pencil, all spurs present. Abdomen not crested. Frenulum fully developed. Forewing with costa arched, apex squared, termen strongly crenulate, convex, oblique, cell short, DC incurved, SC^1 free, SC^2 normal, M^1 separate; hindwing with termen crenulate, excised between R^1 and R^3, cell short, C very shortly approximated, then rapidly diverging, SC^2 short-stalked with R^1, M^1 with R^3.

Early stages unknown.

Distinguished from the preceding and following genera by the shorter cells, with consequent stalking of the radials of hindwing; also from *Dooabia* by hindwing-shape and from *Chlorodontopera* by the simple ♂ antenna.

Type of the genus : *Euxena crypsichroma*, Warren (1896).

Geographical distribution of species. — Malay Peninsula to Borneo, ? Philippines.

1. *E. crypsichroma*, Warren. Borneo.
   Euxena crypsichroma, Warren, Novit. Zool. Vol. 3, p. 366 (1896).
2. *E. albiguttata* (Warren). Padang.
   Chlorodontopera albiguttata, Warren, Novit. Zool. Vol. 1, p. 387 (1894).
3. *E. insulsata*, Warren (huj. gen. ?). N. Luzon.
   Euxena insulsata, Warren, Novit. Zool. Vol. 4, p. 39 (1897).

37. Genus CHLORODONTOPERA, Warren

Chlorodontopera. Warren, Proc. Zool. Soc. Lond. p. 351 (1893).

Characters. — Face smooth. Palpus moderate, rather stout, second joint with rough projecting scales beneath, third joint small in ♂, slightly rougher-scaled than normal, moderate in ♀. Tongue developed. Antenna in ♂ bipectinate to four-fifths, the branches varying in differing species, in ♀ lamellate. Pectus and femora hairy. Hindtibia in ♂ dilated, with strong hair-pencil, in both sexes with all spurs. Abdomen very slightly crested 3). Frenulum fully developed, in ♀ strong and compact. Forewing with costa nearly straight, apex roundly prominent, termen strongly dentate anteriorly (excised between R^1 and R^3), crenulate and very oblique posteriorly, cell about one-half, DC inbent, SC^1 from cell, anastomosing with C and SC^2, SC^2 normal, R^1 well separate, R^2 above middle, M^1 separate: hindwing with termen dentate, strongly excised between R^1 and R^3, cell nearly one-half, DC deeply inbent, SC^2 separate, R^2 from near R^1, M^1 separate (Pl. 1, Fig. 11).

Early stages unknown.

1) Not preoccupied by *Euxenus*, Le Conte, 1870.
2) If *insulsata* really belongs to this genus, sometimes bipectinate.
3) We have seen few really good specimens, but believe that, as in *Agathia*, the crests are sometimes wanting; in any case they have hardly generic significance.

Type of the genus : *Chlorodontopera chalybeata* (Moore) = *Odontoptera chalybeata*, Moore (1893).

Geographical distribution of species. — N. India to Formosa.

1. *C. chalybeata* (Moore). — N. India.
   Odontoptera chalybeata, Moore, Proc. Zool. Soc. Lond. p. 580, t. 34, f. 4 (1872).
   Chlorodontopera chalybeata, Warren, ibidem. p. 352 (1803).
2. *C. discospilata* (Moore). — N. India, Formosa.
   Odontoptera discospilata, Moore, Proc. Zool. Soc. Lond. p. 621 (1867).
   Chlorodontopera discospilota, Swinhoe, Trans. Ent. Soc. Lond. p. 171 (1894).
   Chlorodontopera discopilata, Hampson, Fauna Ind. Moths, Vol. 3, p. 482 (1895).
   Chlorodontopera discospilata, Swinhoe, Lep. Het. Oxford Mus. Vol. 2, p. 388 (1900).
3. *C. mandarinata* (Leech). — E. China.
   Odontoptera mandarinata, Leech, Trans. Ent. Soc. Lond. p. 141, t. 9, f. 13 (1889).
   Chlorodontopera mandarinata, Leech, Ann. Mag. Nat. Hist. (6), Vol 20, p. 231 (1897).

38. Genus ARACIMA, Butler

Aracima, Butler, Ill. Het. Coll. Brit. Mus. Vol. 2, p. 50 (1878).
Aracina, Scudder, Nomencl. Zool. p. 30 : Univ. Index. p. 26 (1882).

Characters. — Face smooth. Palpus in both sexes short, second joint shortly rough-scaled, third joint quite small. Tongue present. Antenna short, in ♂ with short, subclavate pectinations almost to apex, in ♀ almost simple. Pectus and femora hairy. Hindleg rather stout, tibia in ♂ somewhat dilated, with small hair-pencil, in both sexes with all spurs. Abdomen scarcely crested. Frenulum fully developed. Forewing with costa strongly arched, apex pronounced : termen somewhat oblique, excised below apex and between R^1 and R^3, thence subcrenulate, cell about one-half, DC strongly incurved, SC^1 from cell, anastomosing at a point or very briefly with C and SC^2, SC^2 normal, R^1 separate, R^2 above middle, M^1 well separate ; hindwing with termen strongly crenulate, excised between R^1 and R^3, DC^3 strongly incurved, C moderately approximated to cell near base, rather gradually diverging, SC^2 separate, rarely connate, R^2 from much above middle of DC, M^1 well separate. ♂ genitalia : uncus bifurcate, with two lobes at the base, scobinated on the dorsal surface, gnathos wanting, harpe simple, vinculum square, emarginate at the base (*Comibaena*-form), penis pestillate, scobinated above, on the eighth tergite is a strong plate, with two large spatulate arms which fold round the ventral surface ; perhaps related to the *Terpna*-group, but not closely ; Pierce thinks it has more connection with *Comibaena* ; there are no socii.

Early stages unknown.

Type of the genus : *Aracima muscosa*, Butler (1878).

Geographical distribution of species. — Amur to Japan, ? Formosa.

1. *A. muscosa*, Butler. — Amur to Japan.
   Aracima muscosa, Butler, Ill. Het. Coll. Brit. Mus. Vol. 2, p. 51, t. 36, f. 8 (1878).
   Geometra (?) *vestita*, Hedemann, Hor. Soc. Ent. Ross. Vol. 14, p. 508, t. 3, f. 3 (1879).
   Geometra muscosa, Meyrick, Trans. Ent. Soc. Lond. p. 96 (1892).
   Thalera vestita, Gumppenberg, Nova Acta Acad. Leop. d. Naturf. Halle, Vol. 64, p. 506 (1895).
2. *A. serrata*, Wileman (huj. gen. ?). — Formosa.
   Aracima serrata, Wileman, The Entomologist, Vol. 44, p. 271 (1911).

39. Genus XENOZANCLA, Warren

Xenozancla, Warren, Proc. Zool. Soc. Lond. p. 342 (1893).

Characters — Face smooth. Palpus in ♂ quite moderate, second joint short-scaled, third joint small. Tongue weak. Antenna in ♂ laminate, somewhat flattened. Pectus somewhat hairy. Hindleg in ♂ short, hindtibia dilated with hair-pencil, all spurs present. Abdomen with small crests. Frenulum developed. Forewing with costa arched, apex prominent, termen subcrenulate, excised between apex and R^3, sharply elbowed at R^3, SC^1 from cell, anastomosing with C, SC^2 normal, R^1 not stalked, R^2 from above middle, M^1 separate; hindwing with termen crenulate, toothed at R^1 and R^3, C touching SC at a point near base, rather gradually diverging, SC^2 connate, R^2 very characteristic, M^1 separate.

Early stages unknown.

A genus of uncertain affinities, though indisputably belonging to this subfamily. We have seen no ♀, and only two ♂♂, and as the ♂ hindwing shows just a suspicion of basal expansion, it is possible that our provisional location may need revision. One or two characters suggest a not impossible affinity with the African *Bathycolpodes*, etc.

Type of the genus : *Xenozancla versicolor*, Warren (1893).

Geographical distribution of species. — N. India.

1. *X. versicolor*, Warren. N. India.

Xenozancla versicolor, Warren, Proc. Zool. Soc. Lond. p. 342, t. 32, f. 17 (1893).

40. Genus XENOPEPLA, Prout

Xenopepla (Warren, Novit. Zool. Vol. 14, p. 210, indescr.). Prout, Ann. Mag. Nat. Hist. (8), Vol. 6, p. 238 (1910).

Characters. — Face smooth. Palpus in ♂ moderate, second joint with long, stiff, projecting hairs (directed forward) above and beneath, third joint small (Pl. 5). Tongue strong. Antenna in ♂ bipectinate with long branches (apex probably simple). Pectus somewhat hairy. Hindtibia in ♂ dilated with hair-pencil and moderate terminal process, all spurs present. Abdomen not crested. Frenulum in ♂ moderately strong, hindwing without appreciable costal expansion. Forewing elongate, costa gently arched, apex moderate, termen entire, moderately oblique anteriorly, curving strongly in middle and becoming extremely oblique posteriorly, tornus rounded, cell fully one-half, DC incurved, SC^1 anastomosing with C, or free, SC^2 normal, R^1 connate or shortly stalked, M^1 connate or approximated; hindwing rather small and narrow, apex rounded, termen with a sinus between R^1 and R^3, a rather pronounced though blunt tooth at R^3, thence weakly sinuate to tornus, which is moderate, cell one-half, DC slightly curved, C anastomosing with SC briefly at a little distance from base, then rapidly diverging, SC^2 stalked, M^1 stalked or approximated.

Early stages unknown.

A remarkably distinct genus in its entire facies, yet structurally quite typically Hemitheine; except that the palpal hairs are abnormally long, we cannot point to any salient structural character. The ♀ is unfortunately unknown, but will almost certainly possess a frenulum.

Type of the genus : *Xenopepla bicuncata*, Prout (1910).

Geographical distribution of species. — Colombia, Peru.

1. *X. bicuneata*, Prout. — Pl. 2, Fig. 11. Colombia.
Xenopepla bicuneata, Prout, Ann. Mag. Nat. Hist. (8), Vol. 6, p. 238 (1910).

2. *X. flavinigra*, Warren. Peru.
Xenopepla flavinigra, Warren, Novit. Zool. Vol. 14, p. 210 (1907).

41. Genus LIMBATOCHLAMYS, Rothschild

Limbatochlamys. Rothschild, Novit. Zool. Vol. 1, p. 540 (1894).

Characters. — Face densely scaled. Palpus in ♂ quite moderate, second joint rough-scaled, third joint small, concealed. Tongue present. Antenna in ♂ bipectinate to near apex with extremely short branches. Pectus and femora strongly hairy. Hindtibia in ♂ not dilated, with four well-developed spurs. Tarsi spinulose. Abdomen not robust, not crested. Wings ample. Frenulum fully developed. Forewing with costa moderately arched, apex acute, somewhat falcate, termen oblique, slightly convex in posterior half, cell nearly one-half, DC^3 rather strongly oblique posteriorly, SC^1 from cell, anastomosing shortly or connected by very short bar with C, SC^2 normal, R^1 from close to SC^{2-5}, M^1 separate; hindwing with apex rounded, termen slightly waved, tornal region somewhat produced, inner margin long, cell nearly one-half, DC^3 inbent, strongly oblique posteriorly, C approximated to cell to almost one-half, not very rapidly diverging, SC^2 separate, R^2 from much above middle, M^1 separate.

Early stages unknown.

Probably related to *Tanaorhinus*, etc.; may possibly really have more to do with the non-crested members of Group II, but the smoother scaling of the wings, their shape, and their amplitude relatively to the body have induced us to regard it as belonging here.

Type of the genus : *Limbatochlamys rosthorni*, Rothschild (1894).

Geographical distribution of species. — W. China.

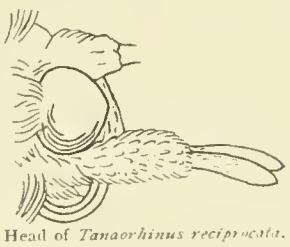
1. *L. rosthorni*, Rothschild. W. China.
Limbatochlamys rosthorni, Rothschild, Novit. Zool. Vol. 1, p. 540, t. 12, f. 6 (1894).

42. Genus TANAORHINUS, Butler

Tanaorhinus. Butler, Ill. Het. Coll. Brit. Mus. Vol. 3, p. 38 (1879).
Tanaorrhinus. Kirby, Zool. Rec. Vol. 16, p. 177 (1881).
Mixochlora. Warren, Novit. Zool. Vol. 4, p. 42 (1897) (indescr.).

Characters. — Face densely scaled, sometimes slightly protuberant. Palpus moderate to long, second joint reaching well beyond frons (longer in ♀ than in ♂), densely scaled, but without the long-spreading hairs of typical *Hipparchus*, third joint in ♂ moderate or rather long, in ♀ very long, smoother-scaled, cylindrical (Fig. 5). Tongue developed. Antenna moderate, in ♂ bipectinate, typically with rather short stout pectinations to little beyond one-half, in ♀ simply pubescent. Pectus densely hairy. Legs stout. Femora strongly hairy. Hindtibia in ♂ dilated with hair-pencil, in both sexes with all spurs. Tarsi spinulose. Abdomen not crested. Frenulum fully developed. Forewing with costa arched, strongly so in distal half, apex produced, more or less falcate, termen (except in *discolor*) smooth, not convex, tornus well expressed, cell rather less than one-half, DC incurved, SC^1 free, SC^2 normal, R^1 separate, M^1 separate; hindwing with

Fig. 5



Head of *Tanaorhinus reciprocata*, Walker, ♀.

apex not pronounced, termen (except in *discolor*) rounded, tornal area more or less produced, inner margin sometimes concave near tornus, leaving a conspicuous rounded tornal lobe, cell rather short, DC^2 and DC^3 usually separately incurved, resulting in an angle at origin of R^3, C approximated or parallel to cell to almost one-half, then rapidly diverging, SC^2 separate, R^2 from considerably above middle, M^1 separate. ♂ genitalia with uncus bifid, widely separate at the base, gnathos with long blunt tip, harpe simple with sacculus, penis pestillate, coremata present (*rafflesii*).

Early stages unknown.

This has always been accepted as a natural genus, but it is doubtful whether, upon a survey of all the material, it should not rather be treated as a section of *Hipparchus*. The shape, which is the most obvious distinction in the typical sections, is inconstant; thus species no. 6 to 8 of *Tanaorhinus* (*Mixochlora*, Warren, indescr.) have the forewing scarcely more falcate than *Hipparchus* (*Loxochila*) *smaragdus*. The palpus, though typically longer in *Tanaorhinus*, is in like case: some species of *Hipparchus* (*Megalochlora*) approach the less extreme species of *Tanaorhinus*. The exact extent of the antennal pectinations, though it has been used by Meyrick as generic, in separating *Hipparchus* [1] from *Megalochlora*, seems to us much too slight a distinction; moreover, the pectinations reach somewhat further (to almost two-thirds) in the *Mixochlora*-section than in typical *Tanaorhinus*, and less far in most sections of *Hipparchus* than in the typical one.

Type of the genus : *Tanaorhinus confuciaria* (Walker) = *Geometra confuciaria*, Walker (1879).

Geographical distribution of species. — India and China to New Guinea.

Section I. — Termen of both wings smooth.

1. *T. confuciaria* (Walker) (sequ. var.?). — China, Japan.
   Geometra confuciaria, Walker, List Lep. Ins. Brit. Mus. Vol. 22, p. 522 (1861).
   Tanaorhinus confuciaria, Butler, Ill. Het. Coll. Brit. Mus. Vol. 3, p. 38, t. 50, f. 4 (1879).
2. *T. reciprocata* (Walker). — N. India, ? S. China.
   Geometra reciprocata, Walker, List Lep. Ins. Brit. Mus. Vol. 22, p. 515 (1861).
   Geometra dimissa, Walker, ibidem, p. 516 (1861).
   Tanaorhinus dimissus, Butler, Ill. Het. Coll. Brit. Mus. Vol. 6, p. 68, t. 117, f. 3 (1886).
   Tanaorhinus reciprocatus, Butler, ibidem, p. 68, t. 117, f. 4 (1886).
   Tanaorhinus dimissa, Cotes & Swinhoe, Cat. Moths Ind. (4), p. 516 (1888).
   Tanaorhinus reciprocata, Cotes & Swinhoe, ibidem, p. 516 (1888).
3. *T. rafflesii* (Moore). — N. India to Sunda Islands and Philippines.
   Drepana rafflesii, Moore, Cat. Lep. E. Ind. House, Vol. 2, p. 300, t. 114, f. 1 (1859).
   Geometra viridiluteata, Walker, List Lep. Ins. Brit. Mus. Vol. 22, p. 515 (1861).
   Geometra luteovirudata, Walker, ibidem, p. 524 (1861).
   Geometra subsquata, Walker, ibidem, p. 525 (1861).
   Geometra basalluta, Walker, ibidem, Vol. 35, p. 1603 (1860).
   Tanaorhinus viridiluteatus, Butler, Ill. Het. Coll. Brit. Mus. Vol. 6, p. 67, t. 117, f. 2 (1886).
   Tanaorhinus viridiluteata, Cotes & Swinhoe, Cat. Moths Ind. (4), p. 516 (1888).
   Tanaorhinus rafflesii, Swinhoe, Lep. Het. Oxford Mus. Vol. 2, p. 393 (1900).
4. *T. kina*, Swinhoe. — Khásis.
   Tanaorhinus kina, Swinhoe, Ann. Mag. Nat. Hist. (6), Vol. 12, p. 150 (1893).
5. *T. unipuncta*, Warren. — New Guinea.
   Tanaorhinus unipuncta, Warren, Novit. Zool. Vol. 6, p. 331 (1899); Vol. 10, p. 364 (1903).

1) Under the name of *Geometra*; vide *Trans. Ent. Soc. Lond.* p. 63, 65, 66 (1802).

6. *T. argentifusa* (Walker). — Borneo, ? Dutch N. Guinea.
Geometra argentifusa, Walker, List Lep. Ins. Brit. Mus. Vol. 22, p. 520 (1861).
Mixochlora argentifusa, Warren, Novit. Zool. Vol. 4, p. 42 (1897).
Tanaorhinus argentifusa, Swinhoe, Lep. Het. Oxford Mus. Vol. 2, p. 304, t. 6, f. 4 (1900).

7. *T. vittata* (Moore). — N. W. India to Japan, Sumatra.
Geometra vittata, Moore, Proc. Zool. Soc. Lond. p. 636 (1867); Waterhouse, Aid, Vol. 2, t. 151, f. 5 (1884).
Tanaorhinus prasinus, Butler, Ann. Mag. Nat. Hist. (5), Vol. 4, p. 438 (1879).
Megalochlora vittata, Swinhoe, Trans. Ent. Soc. Lond. p. 174 (1894).
Tanaorrhinus vittatus, Hampson, Fauna Ind. Moths, Vol. 3, p. 494 (1895).
Mixochlora vittata, Warren, Novit. Zool. Vol. 4, p. 42 (1897).

8. *T. alternata* (Warren). — Philippines.
Mixochlora alternata, Warren, Novit. Zool. Vol. 4, p. 42 (1897).
Tanaorhinus alternata, Semper, Reisen Philipp. (2), Vol. 6, p. 630 (1902).

SECTION II.—Both wings with termen angled at R^3, and faintly at the other vein-ends (gen. div.?).

9. *T. discolor*, Warren. — Khasis, Formosa.
Tanaorhinus discolor, Warren, Novit. Zool. Vol. 3, p. 108 (1896).
Thalassodes discolor, Hampson, Journ. Bombay Nat. Hist. Soc. Vol. 12, p. 92 (1898).

43. GENUS CHLOROZANCLA, NOV. GEN., PROUT

Chlorozancla (Warren, MS., in coll. Elwes), **nov. gen.** Prout.
Tanaorrhinus, sect. II. Hampson, Fauna Ind. Moths, Vol. 3, p. 494 (1895).

Characters. — Face smooth. Palpus in both sexes minute, second joint smooth-scaled. Tongue present. Antenna in ♂ bipectinate to apex, with moderately long branches, in ♀ nearly simple. Hind-tibia in ♂ not dilated, in both sexes with all spurs. Abdomen not crested. Frenulum fully developed. Forewing with costa arched, apex strongly falcate, termen oblique, not convex, cell rather short, DC deeply incurved, extremely oblique posteriorly, SC^1 from cell, anastomosing strongly with C, SC^2 normal, R^1 separate, M^1 well separate; hindwing with costal and inner margins rather long, apex rounded, termen smooth, rounded, tornus pronounced, cell short, DC^3 deeply incurved, very oblique posteriorly, C approximated to cell for some distance, then rather rapidly diverging, SC^2 connate or, exceptionally, short-stalked with R^1, M^1 well separate.

Early stages unknown.

Probably a development of *Tanorhinus*, but entirely different in the palpus, besides some small distinctions, one of which Hampson uses in erecting his Section II of *Tanaorhinus*.

Type of the genus : *Chlorozancla falcatus* (Hampson) = *Tanaorrhinus falcatus*, Hampson.

Geographical distribution of species. — India.

1. *C. falcatus* (Hampson). — India.
Tanaorrhinus falcatus, Hampson, Fauna Ind. Moths, Vol. 3, p. 494 (1895).
Chlorozancla falcata, Warren, MS. (in coll. Elwes).

44. GENUS HIPPARCHUS, LEACH

Hipparchus. Leach, Edinb. Encycl. Vol. 9 (1), p. 134 (1815); Stephens, Syst. Cat. Brit. Ins. (2), p. 122 (1829).
Terpne. Hübner, Tentamen, p. 2 (1806?) (ined.?) (gen. indescr.).

Leptornis. Billberg, Enum. Ins. Mus. Billb. p. 90 (1820) (gen. indescr.).

Holothalassis. Hübner, Verz. bek. Schmett. p. 285 (1826?).

Geometra. Duponchel, Hist. Nat. Lép. Vol. 7 (2), p. 106 (1829) (Treitschke, 1825, part.; nec Linne. Leach restr., 1815).

Geometra (Hipparchus). Herrich-Schäffer, Syst. Bearb. Schmett. Eur. Vol. 3, p. 8 (1844).

Loxochila. Butler, Proc. Zool. Soc. Lond. p. 615 (1881).

Megalochlora. Meyrick, Trans. Ent. Soc. Lond. p. 95 (1892).

Chloroglyphica. Warren, Novit. Zool. Vol. 1, p. 387 (1894).

Geometrina. Warren, ibidem, Vol. 2, p. 89 (1895) (nec Motschulsky).

Hydrochroa. Gumppenberg, Nova Acta Acad. Leop. d. Naturf. Halle, Vol. 64, 459 (1895).

Characters. — Face rounded, hardly protuberant, smooth-scaled. Palpus moderate to long, second joint rough-haired above and beneath, third joint shortish to moderate, in ♀ sometimes long, smooth-scaled. Tongue developed. Antenna moderate, in ♂ bipectinate, apex usually simple, in ♀ nearly simple. Pectus and femora hairy. Hindtibia in ♂ with hair-pencil (except in *sponsaria*), sometimes with a short terminal process, in both sexes with all spurs. Tarsi spinulose. Abdomen not crested, in ♂ sometimes (*sponsaria, dieckmanni*) with strong anal tuft. Wings ample, thickly scaled. Frenulum fully developed. Forewing with costa slightly arched or nearly straight (very straight in Section IV), apex usually acute, sometimes subfalcate, termen oblique, nearly straight to convex, smooth to somewhat crenulate, sometimes emarginate below apex, cell somewhat less than one-half, discocellulars more or less curved, sometimes slightly angled at origin of R^2, SC^1 from cell, free or anastomosing with C (variable even in the type species), SC^2 normal, R^1 approximated, connate or very shortly stalked with SC^{2+3}, M^1 approximated to R^3; hindwing with apex rounded or nearly so, termen convex rarely (*smaragdus*) smooth throughout, usually with an elbow or small tail at R^3, sometimes also (*papilionaria, albovenaria, valida*) crenulate throughout, cell less than one-half, discocellulars more or less curved, sometimes slightly angled at origin of R^2, C approximated to cell rather shortly or moderately, then rapidly diverging, SC^2 approximated at origin to R^1, R^2 variable in exact position, M^1 approximated to R^3. ♂ genitalia with uncus bifid, gnathos terminating in forward-curved point, harpe simple, with sacculus, penis rounded at base.

Egg. — Strongly-built, oval, the micropylar end broader and somewhat flattened, a depression on either side, the surface sculptured with strongly marked cells, micropyle shown by a shallow, circular, rayed pit (Bacot, on the type species, *Entom. Record*, Vol. 17, p. 222, t. 8, f. 1*a*, 1*b*).

Larva. — In the type species rather stout, rugose, the surface more or less shagreened, segment-incisions well marked, head rounded in first instar, slightly notched afterwards, setae more or less tapering, mostly with enlarged tops, most of the primary setae in first instar forked, the young larva showing traces of the habit of attaching silken threads which is so marked in some of the *Hemitheinae*. The small, hibernating larvae brown, of adaptive shade, protectively assimilating to tiny twigs, the larvae in the spring fixedly dimorphic, either green marked with brown, or altogether brown, wonderfully assimilated to the catkins of birch, etc., among which they are feeding; various small protuberances and projecting edges of segments enhancing the resemblance (see Bacot, loc. cit.; Grapes, *The Entomologist*, Vol. 22, p. 110; Poulton, *Trans. Ent. Soc. Lond. 1888*, p. 592, 1892, p. 310, etc.).

Pupa. — Cylindrical, but for the projection of the wing-cases ventro-laterally; a regular tapering from fourth abdominal segment to anal extremity; a strong conical projection before anus bearing the armature of eight tall, slender hooks; segment-incisions, spiracles and setae distinct, sexual organs conspicuous; spun loosely among leaves (*papilionaria*: see Bacot, *Entom. Record*, Vol. 17, p. 225, for full description).

The genus, as here understood, seems quite a natural one, in spite of a tolerable amount of variation in the shape of the termen of both wings, and some variation in the length of the third palpal joint. We have indicated as sectional the genera which have been accepted by some systematists, but do not attach great importance to them. The section *Chloroglyphica* presents the most distinct facies, but *Megalochlora* alone shows most of the principal varieties of shape.

Type of the genus : *Hipparchus papilionaria* (Linné) = *Phalaena Geometra papilionaria*, Linné (1829).

Geographical distribution of species. — Palæarctic Region (chiefly the eastern part) and N. India.

Section I. — Hindwing with termen crenulate, third joint of palpus shortish to moderate, ♂ antenna bipectinate to apex, hair-pencil very small (*Hipparchus*, Leach).

1. *H. papilionaria* (Linné). Europe to Japan.

Phalaena Geometra papilionaria, Linné, Syst. Nat. ed. 10, Vol. 1, p. 522 (1758).
Phalaena prasinaria, Hufnagel, Berl. Mag. Vol. 4. p. 500 (1767).
Geometra papilionaria, Hübner, Samml. Eur Schmett., Geom. t. 2, f. 6 (1796?); p. 16 (1800?).
Terpne papilionaria, Hübner, Tentamen, p. 2 (1806?).
Hipparchus papilionaria, Leach, Edinb. Encycl. Vol. 9 (1), p. 134 (1815).
Holothalassis papilionaria, Hübner, Verz. bek. Schmett. p. 285 (1826?).
Geometra herbaceata, Ménétriés, Mél. Biol. Acad. Sc. St-Pétersb. Vol. 3, p. 112 (1859) (ab.).
Geometra papilionaria ab. *cuneata*, Burrows, Ent. Record, Vol. 17, p. 202 (1905) (ab. .
Geometra papilionaria ab. *subcaerulescens*, Burrows, ibidem, p. 202 (1905) (ab.).
Geometra papilionaria ab. *subobsoleta*, Burrows, ibidem, p. 202 (1905) (ab.).
Geometra papilionaria ab. *deleta*, Burrows, ibidem, p. 203 (1905) (ab.).
Geometra papilionaria ab. *alba*, Gillmer, Soc. Ent. Zurich, Vol. 24, p. 42 (1909) (ab.).

Section II. — Forewing with apex subfalcate, both wings with termen otherwise smooth, palpus with third joint rather short to moderate, ♂ antenna with apex simple, hair-pencil strong (*Loxochila*, Butler).

2. *H. smaragdus* (Butler). N. India.

Tanaorhinus smaragdus, Butler, Ann. Mag. Nat. Hist. (5), Vol. 6, p. 128 (1880).
Loxochila smaragdus, Butler, Proc. Zool. Soc. Lond. p. 615 (1881); Ill. Het. Coll. Brit. Mus. Vol. 6, p. 60, t. 117, f. 5 (1886).
Geometra smaragdus, Hampson, Fauna Ind. Moths, Vol. 3, p. 495 (1895).

3. *H. flavifrontaria* (Guenée). India.

Nemoria flavifrontaria, Guenée, Spec. Gén. Lép. Vol. 9, p. 346 (1858).
Loxochila mutans, Butler, Proc. Zool. Soc. Lond. p. 615 (1881).
Geometra flavifrontaria, Hampson, Fauna Ind. Moths, Vol. 3, p. 496, f. 220 (1895).

4. **H. pratti, nov. sp.** [1]), Prout. Central China.

Geometra flavifrontaria, Leech, Ann. Mag. Nat. Hist. (6), Vol. 20, p. 234 (1897) (nec Guenée).

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1) **Hipparchus pratti nov. sp.** — ♀, 59 mm. Very similar to *flavifrontaria*, Guenée, build somewhat more robust, palpus somewhat longer, both wings with costa somewhat longer, colour brighter green, forewing with SC^4 anastomosing strongly with C, postmedian line of forewing broader, somewhat oblique (from costa 7 mm. before apex to inner margin 8 mm. from tornus), termen slightly less straight. Ichang, June, 1888 (Mrs. Pratt); type in coll. Brit. Mus.

SECTION III. — Hindwing with termen elbowed or toothed at R^3, often crenulate throughout, palpus with third joint elongate, ♂ antenna with apex simple, hindtibia variable (*Megalochlora*, Meyrick = *Geometrina*, Warren = *Hydrochroa*, von Gumppenberg 1).

5. *H. glaucaria* (Ménétriés). — Amur to Japan.
   Geometra glaucaria, Ménétriés, Mél. Biol. Acad. Sc. St-Pétersb. Vol. 3, p. 111 (1850).
   Geometra usitata, Butler, Ill. Het. Coll. Brit. Mus. Vol. 2, p. 49, t. 36, f. 3 (1878).
   Megalochlora glaucaria, Meyrick, Trans. Ent. Soc. Lond. p. 95 (1892).
   Hydrochroa glaucaria, Gumppenberg, Nova Acta Acad. Halle, Vol. 64, p. 400 (1895).
6. *H. albovenaria* (Bremer). — Amur to Corea, China, Japan.
   Geometra albovenaria, Bremer, Mém. Acad. Sc. St-Pétersb. Vol. 8, p. 75, t. 6, f. 21 (1864).
   Megalochlora albovenaria, Meyrick, Trans. Ent. Soc. Lond. p. 95 (1892).
7. *H. sponsaria* (Bremer 2). — E. Siberia.
   Chlorochroma sponsaria, Bremer, Mém. Acad. Sc. St-Pétersb. Vol. 8, p. 77, t. 6, f. 25 (1864).
   Megalochlora sponsaria, Meyrick, Trans. Ent. Soc. Lond. p. 95 (1892).
   Megalochlora viridescentaria, Warren, Novit. Zool. Vol. 2, p. 80 (1895) (nec Motschulsky).
8. *H. valida* (Felder). — Amur to Corea, Japan.
   Geometra valida, Felder, Reise Novara, Lep. Het. t. 127, f. 37 (1875).
   Geometra dioptasaria, Christoph, Bull. Soc. Nat. Moscou, Vol. 55 (2), p. 41 (1881).
   Megalochlora valida, Meyrick, Trans. Ent. Soc. Lond. p. 95 (1892).
9. *H. dieckmanni* (Graeser). — S. E. Siberia, Corea, Japan.
   Chlorochroma sponsaria var. B, Bremer, Mem. Acad. Sc. St-Petersb. Vol. 8, p. 77 (1864).
   Geometra dieckmanni, Graeser, Berl. Ent. Zeitschr. Vol. 32, p. 384 (1889).
   Megalochlora dieckmanni, Meyrick, Trans. Ent. Soc. Lond. p. 95 (1892).
   [*Geometra*] *promissaria*, Staudinger, MS. (teste Staudinger, Iris, Vol. 10, p. 5, 1897).
10. *H. maculata* (Warren). — Khasis.
   Chloroglyphica maculata, Warren, Novit. Zool. Vol. 4, p. 208, t. 5, f. 23 (1897).
11. *H. mandarinaria* (Leech). — W. China.
   Megalochlora mandarinaria, Leech, Ann. Mag. Nat. Hist. (6), Vol. 20, p. 235 (1897).
12. *H. vallata* (Butler). — Japan, N. India.
   Thalassodes vallata, Butler, Ill. Het. Coll. Brit. Mus. Vol. 2, p. 50, t. 36, f. 9 (1878).
   Megalochlora vallata, Warren, Novit. Zool. Vol. 3, p. 108 (1896).

SECTION IV. — Forewing with costa straight, termen minutely crenulate from apex to R^1, there appreciably elbowed, tornus squared, hindwing with termen toothed at R^3, otherwise smooth, palpus with third joint in ♂ small, in ♀ longish, ♂ antenna with apex simple, hindtibia with strong pencil (*Chloroglyphica*, Warren).

13. *H. variegata* (Butler). — N. India.
   Loxochila variegata, Butler, Ill. Het. Coll. Brit. Mus. Vol. 7, p. 104, t. 130, f. 3 (1889).
   Chloroglyphica variegata, Warren, Novit. Zool. Vol. 1, p. 387 (1894).
   Thalassodes variegata, Hampson, Fauna Ind. Moths, Vol. 3, p. 514 (1895).

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1) The type of *Hydrochroa glaucaria*, Ménétriés, has neither termen crenulate, the elbow at R^3 of hindwing weak, and the ♂ antenna pectinations reaching to nearer the apex than in its allies, but we cannot accept it as even sectionally distinct.

2) Bremer's figure is very defective, showing non-pectinate ♂ antenna, inexact shape, broadly white costa, etc.; but Prof. Kusnezov has kindly examined his type, and confirmed the identification of Graeser, Staudinger and others.

14. *H. hypoleuca* (Hampson). Burma.
Thalassodes hypoleuca, Hampson, Journ. Bombay Nat. Hist. Soc. Vol. 14. p. 656, t. C, f. 34 (1903).

Note. — The correct subfamily position of various species wrongly described by Walker, Moore and Butler as *Geometra* may be found from Hampson's *Moths of India* or Swinhoe's *Lep. Het. Oxford Mus.* *G. subvectaria*, *diffissa* and *factaria*, Walker (Vol. 22, p. 509, 510, 511) belong to *Numia*, Guenée; *G. rufifrontaria*, Hampson, *Journ. Bombay Nat. Hist. Soc.* Vol. 14, p. 655, is an Acidaliid, sinking to *Sterrha* (?) *validaria*, Walker (Vol. 35, p. 1607); *P. G. arnea*, Cramer, *Pap. Exot.* Vol. 1, p. 59, t. 36, f. G = *G.* (?) *arnea*, Walker (Vol. 20, p. 1554) belongs to the *Pyralidae*, genus *Acropteryx*.

45. Genus IOTAPHORA, Warren

Iotaphora. Warren, Novit. Zool. Vol. 1, p. 384 (1894).
Grammicheila. Staudinger, Iris, Vol. 10, p. 3 (1897).

Characters. — Face rounded, smooth-scaled. Palpus in both sexes quite moderate, second joint strongly rough-scaled, third joint small, slightly longer in ♀ than in ♂. Tongue present. Antenna less than one-half, in ♂ bipectinate with short branches, apex almost simple, in ♀ lamellate, minutely ciliated. Pectus and femora strongly hairy. Hindtibia in ♂ dilated with hair-pencil, in both sexes with all spurs. Abdomen not crested. Wings smooth-scaled, iridescent. Frenulum fully developed. Forewing with costa arched, apex not acute, termen oblique, waved, convex, cell not quite one-half, DC gently incurved, SC^1 free, SC^2 normal, R^1 approximated, connate or short-stalked with SC^{2-5}, M^1 approximated to R^3; hindwing with apex rounded, termen moderately rounded, gently subcrenulate, tornus moderately pronounced, cell short DC incurved, strongly oblique posteriorly, C approximated to cell to nearly one-half, moderately rapidly diverging, SC^2 just separate, R^2 from considerably above middle of DC, M^1 separate. ♂ genitalia : uncus with a central rod, at either side of which is an arm of the same length, gnathos with pointed tip, harpe with slight projections on the surface, juxta (?) a process arising from the base of the vinculum, on the eighth sternite is a double lobed chitinous projection.

Larva. — Light green, deceptively like a young, half-expanded leaf of the foodplant, *Juglans mandschurica*, Maxim.; head produced into two points, body contracted, resting rigidly attached by the prolegs to a twig (Graeser, *Berl. Ent. Zeitschr.* Vol. 32, p. 392). Suggestive of that of *Hipparchus* (Staudinger, *Iris*, Vol. 10, p. 3).

Pupa. — Undescribed; in a loose cocoon among dry leaves (Graeser, loc. cit.).

The genus is almost certainly related to *Hipparchus*, in spite of the different scaling and pattern. Its true position is quite certainly in the present subfamily, and we are entirely unable to say on what grounds Hampson (*Fauna Ind. Moths*, Vol. 3, p. 322) placed it among his *Orthostixinae*. It may have some affinity with *Osteosema*, but this is less definite.

Type of the genus : *Iotaphora iridicolor* (Butler) = *Panaethia iridicolor*, Butler (1894).

Geographical distribution of species. — N. India to Amur.

1. *I. iridicolor* (Butler). N. India.
Panaethia iridicolor, Butler, Ann. Mag. Nat. Hist. (5), Vol. 6, p. 227 (1880); Ill. Het. Coll. Brit. Mus, Vol. 6, p. 49, t. 113, f. 3 (1886).
Iotaphora iridicolor, Warren, Novit. Zool. Vol. 1, p. 384 (1894).

2. *I. admirabilis* (Oberthür). China to Amur.

Metrocampa (?) *admirabilis*, Oberthür, Bull. Soc. Ent. Fr. 6, Vol. 3, p. 84 (1883); Etud. Ent. Vol. 10, p. 29, t. 1, f. 8 (1884).
Megalochlora iridicolor (part.), Meyrick, Trans. Ent. Soc. Lond. p. 65 (1892).
Grammicheila admirabilis, Staudinger, Iris, Vol 10, p. 3 1897.
Iotaphora admirabilis, Staudinger, Cat. Lep. (ed. 3), p. 322 (1901).

46. Genus CHLORORITHRA, Butler

Chlororithra, Butler, Ill. Het. Coll. Brit. Mus. Vol. 8, p. 106 (1889).

Characters. — Face smooth. Palpus rather long, second joint strongly rough-scaled, reaching beyond frons, third joint smooth, in ♂ moderate, in ♀ rather long. Tongue developed. Antenna in ♂ bipectinate to about two-thirds, in ♀ simple. Pectus hairy. Hindtibia in ♂ dilated with long pencil of hairs, a very short terminal process, in both sexes with four unequal spurs. Tarsi spinulose. Abdomen not crested. Wings smoothly scaled, iridescent. Frenulum fully developed. Forewing with costa very slightly arched, apex rather acute, termen oblique, very slightly waved, cell nearly one-half, DC^3 deeply incurved, SC^1 free, SC^2 normal, R^1 well separate, R^2 from near R^1, M^1 separate; hindwing with apex rounded, termen convex, waved, slightly gibbous about R^3, cell less than one-half, DC^3 incurved, C approximated to cell to nearly one-half, then strongly diverging, SC^2 separate, R^2 from close to R^1, sometimes almost connate, M^1 connate or very short-stalked with R^3 (**Pl. 2, Fig. 9**). ♂ genitalia very distinct from any other studied, uncus a long rod, with curved socii, gnathos terminating in a tooth, harpe with a scobinated projection towards the base of the inner margin, penis pestillate, narrow; on the eighth sternite there is a rounded plate, emarginate on the upper edge, from which protrude a pair of scobinated arms; this species has long coremata.

Early stages unknown.

This genus is likely related to the preceding, which it resembles in its smooth-scaled, iridescent wings, and in various other characters.

Type of the genus : *Chlororithra tea*, Butler (1889).

Geographical distribution of species. — N. India.

1. *C. tea*, Butler. N. India.

Chlororithra tea, Butler, Ill. Het. Coll. Brit. Mus. Vol. 8, p. 106, t. 130, f. 9 (1889).
Geometra tea, Hampson, Fauna Ind. Moths, Vol. 3, p. 407 (1895).

47. Genus DIOSCORE, Warren

Dioscore, Warren, Novit. Zool. Vol. 14, p. 132 (1907).
Halterophora, Warren, ibidem, Vol. 3, p. 289 (1896) (nec Rondani, 1861).

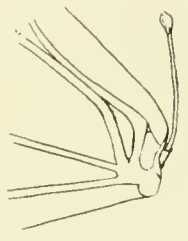
Characters. — Face prominent, densely but smoothly scaled. Palpus moderate, stout, first and second joints densely clothed, third joint in ♂ small, blunt (♀ unknown). Tongue developed. Antenna nearly two-thirds, in ♂ bipectinate to about one-half, with moderate, decreasing branches, a long apical portion nearly simple. Pectus densely hairy. Femora hairy. Hindtibia in ♂ dilated with hair pencil, all spurs present (**Fig. 6**). Tarsal spinules moderately conspicuous. Metathorax slightly

crested. Abdomen not crested. Build robust. Frenulum in ♂ very strong, terminating in a large knob (*bicolor*, *fulgurata*, *thalassias*, Fig. 7) or at least in a very considerable, though more gradual thickening (*melanomma*). Forewing with costa nearly straight, gently arched distally, apex prominent, termen oblique (especially in type species), slightly curved, cell less than one-half, strongly produced apically, DC incurved, SC^1 from cell, free, SC^2 normal, R^1 stalked or separate, M^1 approximated at origin to R^3; hindwing with termen rather long, rounded, sometimes subcrenulate, sometimes also with a small tail at R^3, inner margin long, cell rather short, DC^3 slightly or sharply inbent. C closely appressed to cell for a short or moderate distance, then very strongly diverging, SC^2 just separate or short-stalked, R^2 from near R^1, M^1 short-stalked, connate or separate. ♂ genitalia : uncus massive, parallel, with large, broad socii, gnathos strong, pointed, harpe simple, penis pestillate, with very long, parallel sides and a small sharp point; coremata present.

Fig. 6

Hindleg of *Dioscore melanomma*, Warren, ♂.

Fig. 7



Frenulum of *Dioscore bicolor*, Warren, ♂.

Early stages unknown.

A small and rather compact genus, replacing *Hipparchus* in the Papuan Region. The slight differences in shape seem clearly non-generic, as is certainly the case with those of the venation. The most significant of the latter is the frequent short-stalking of SC^2 of the hindwing with R^1, which — as is the case with *Uliocnemis* along another line of evolution — has not yet become fixed generically.

Type of the genus : *Dioscore melanomma*, Warren (1907).

Geographical distribution of species. — New Guinea to Fergusson Island.

1. *D. melanomma*. Warren. — **Pl. 2, Fig. 6.** — British to Dutch New Guinea.
   Dioscore melanomma, Warren, Novit. Zool. Vol. 14, p. 132 (1907).
2. *D. bicolor* (Warren). — Fergusson Island, Dutch New Guinea.
   Halterophora bicolor, Warren, Novit. Zool. Vol. 3, p. 200 (1896).
3. *D. fulgurata* (Warren). — British to Dutch New Guinea.
   Halterophora fulgurata, Warren, Novit. Zool. Vol. 4, p. 50 (1897).
   Loxochila (?) *meeki*, Warren, ibidem, Vol. 10, p. 359 (1903) (nov. syn.).
   Dioscore meeki, Warren, ibidem, Vol. 14, p. 132 (1907).
4. *D. thalassias* (Warren). — Dutch New Guinea.
   Halterophora thalassias, Warren, Novit. Zool. Vol. 10, p. 203 (1903).
5. **D. homœotes, nov. sp.** 1), Prout. — Dutch New Guinea.

1) **Dioscore homœotes, nov. sp.** — ♂, 40 mm. Deceptively like *D. fulgurata*, practically indistinguishable in coloration and markings, but differing as follows. Vertex broadly cream-colour, not green. Antennal pectinations much shorter, ceasing rather *before* one-half of shaft. Forewing with termen curved in posterior half of wing (almost straight in *fulgurata*); hindwing with termen more rounded, rather more crenulate. In addition, the following less important distinctions may or may not hold when more material is compared. Abdominal white spots somewhat extended; white lines on wings somewhat sharper, that of hindwing slightly further from termen, fringes longer, terminal white spots larger, a single oblong one crossing the the submedian fold in each wing (in *fulgurata* there is one small spot on either side of submedian fold, well separated); the pale yellow (not « white », as Warren indicates) metathoraic crest perhaps slightly stronger. The midtibia, which in typical *fulgurata* is marked like the foretibia (purplish fuscous, spotted with ochreous), is in *homœotes* plain green above: but, strangely enough, this coloration is shared by undoubted *fulgurata* from Fak-Fak, Ninay Valley, Central Arfak Mountains, Dutch New Guinea, 3500 feet, Nov. 1908 to Jan. 1909 (A. E. Pratt). Type in coll. L. B. Prout.

48. Genus ORNITHOSPILA, Warren

Ornithospila. Warren, Novit. Zool. Vol. 1, p. 380 (1894).
Urospila. Warren, ibidem, p. 387 (1894).
Afrena. Hampson, Trans. Ent. Soc. Lond. p. 314 (1895).

Characters. — Face slightly protuberant, smoothly scaled. Palpus long, second joint reaching beyond frons, rough-scaled, third joint in both sexes elongate, smooth-scaled. Tongue developed. Antenna long, in ♂ bipectinate to about three-fourths with moderately long, decreasing branches, apex ciliated; in ♀ pubescent, with single short cilia. Pectus and femora hairy. Hindtibia in ♂ not dilated, in both sexes with four strong spurs. Abdomen not crested. Frenulum developed in both sexes (in ♀ not extremely strong). Forewing broad, costa arched at base and towards apex, nearly straight between, apex acute, termen smooth or weakly subcrenulate, tornus pronounced, sometimes rectangular, cell about two-fifths, produced apically, DC^1 sometimes obsolete, leaving the apex of the cell open, DC^2 deeply inbent (sometimes almost angled), DC^3 nearly vertical at first, becoming somewhat oblique, SC^1 stalked with $SC^{2,5}$, not anastomosing with C, SC^5 arising before SC^2, SC^2 sometimes anastomosing shortly with SC^1, R^1 connate or separate, M^1 connate or approximated; hindwing with termen smooth or weakly subcrenulate, very slightly or strongly elbowed at R^3, tornus well pronounced, cell about two-fifths, DC^2 and DC^3 separately incurved, resulting in a sharp angle at base of R^2, C approximated to cell to less than one-half, then rapidly diverging, SC^2 separate, M^1 connate or approximated (Pl. 2, Fig. 10).

Early stages apparently undescribed.

Probably derived from *Hipparchus*, but the specialized subcostal venation, taken in conjunction with the fact that the genitalia of the type species agree better with *Prasinocyma* and the *Iodis*-group than with any of the generalized forms, leaves it somewhat doubtful whether it should not be placed later. Superficially it rather strongly resembles *Chrysochloroma*, which seems to have crossed the borderline into Group V. Except in slight details of shape, the species appear very homogeneous, and we should not have divided the genus into sections but for the fact that previous authors (Warren, Hampson) have made separate genera, and that the genitalia of *avicularia* and *esmeralda* are surprisingly dissimilar. Sections II and III (especially the latter) remind, in shape, of *Hipparchus*, Section IV. As regards the nomenclature, it would perhaps be more strictly correct to adopt the name of *Urospila*, as Hampson selected that in merging Warren's two contemporaneous genera (*Fauna Ind. Moths*, Vol. 3, p. 513). But as *Ornithospila* is in the more general use, and will be preferred by the slaves of « page-priority », besides being more appropriate, we venture to think that Hampson's action can be set aside; he did not actually *adopt* the genus, merely citing the name under one of his sections of *Thalassodes*.

Type of the genus : *Ornithospila avicularia* (Guenée) = *Geometra avicularia*, Guenée (1894).

Geographical distribution of species. — India to New Guinea.

Section I. — Termen of both wings subcrenulate, elbow at R^3 of hindwing extremely slight. ♂ genitalia (*avicularia*) with uncus bifurcate at the extreme tip, with curved socii, gnathos broadly pointed and scobinated, harpe with very small, fine spines on the clasper, penis pestillate, elbowed above (*Ornithospila*, Warren).

1. *O. avicularia* (Guenée). India.

Geometra avicularia, Guenee, Spec. Gen. Lep. Vol. 9, p. 342 (1858).
Geometra pennisignata, Walker, List Lep. Ins. Brit. Mus. Vol. 22, p. 510 (1861).
Ornithospila avicularia, Warren, Novit. Zool. Vol. 1, p. 380 (1894).
Megalochlora avicularia, Swinhoe, Trans. Ent. Soc. Lond. p. 174 (1894).
Thalassodes avicularia, Hampson, Fauna Ind. Moths, Vol. 3, p. 513 (1895).

2. *O. submonstrans* (Walker). — Sumatra and Penang to Moluccas.
Geometra submonstrans, Walker, List Lep. Ins. Brit. Mus. Vol. 22, p. 526 (1861).
Achlora circumflexaria, Snellen, in Veth, Midden-Sumatra, Vol. 4 (8), p. 53, t. 5, f. 1, 1a (1880).
Ornithospila submonstrans, Swinhoe, Lep. Het. Oxford Mus. Vol. 2, p. 403 (1900).

3. *O. cincta* (Walker). — Borneo, Malay Archipelago, Sumatra.
Geometra cincta, Walker, List Lep. Ins. Brit. Mus. Vol. 22, p. 527 (1861).
Ornithospila cincta, Swinhoe, Lep. Het. Oxford Mus. Vol. 2, p. 404, t. 9, f. 2 (1900).

4. *O. psittacina* (Felder). — Moluccas to Dutch New Guinea.
Chlorosoma [1] *psittacina*, Felder, Reise Novara, Lep. Het. t. 127, f. 26 (1875).

Section II. — Both wings with termen faintly waved, hindwing with a strong angle or slight tail at R^3 (*Urospila*, Warren).

5. *O. lineata* (Moore). — N. India.
Geometra lineata, Moore, Proc. Zool. Soc. Lond. p. 580, t. 34, f. 2 (1872).
Urospila lineata, Warren, Novit. Zool. Vol. 1, p. 387 (1894).
Thalassodes lineata, Hampson, Fauna Ind. Moths, Vol. 3, p. 514 (1895).
Ornithospila lineata, Swinhoe, Lep. Het. Oxford Mus. Vol. 2, p. 403 (1900).

Section III. — Both wings with termen smooth, hindwing with a definite elbow at R^3. Anal tuft strongly developed in ♂. ♂ genitalia with uncus tapered, with large socii, densely clothed with thick hairs projecting at right angles, gnathos terminating in a blunt scobinated tip, harpe with large tuft of strong spines, ædœagus wide, tubular, scobinated at the orifice, with central rod wider at the tip (*Afrena*, Hampson) (cad. ac Sect. II?).

6. *O. esmeralda* (Hampson). — N. India to Singapore.
Afrena esmeralda, Hampson, Trans. Ent. Soc. Lond. p. 314 (1895); Fauna Ind. Moths, Vol. 4, p. 565 (1896).

49. Genus APORANDRIA, Warren

Aporandria. Warren, Novit. Zool. Vol. 1, p. 385 (1894).

Characters. — Face thickly scaled, with projecting tuft below (**Pl. 5**). Palpus rather long and strong, second joint in both sexes elongate, long-scaled, third joint densely scaled, in ♂ rather short, in ♀ long. Tongue developed. Antenna in ♂ bipectinate with moderately long, curved, long-ciliated pectinations, apical one-third nearly simple; in ♀ almost equally strongly bipectinate (**Fig. 8**). Pectus densely hairy. Femora hairy. Hindtibia hardly dilated, but not long, all spurs present. Abdomen not crested. Frenulum fully developed. Forewing with costa straight to nearly two thirds, somewhat arched distally, apex acute, termen nearly straight, oblique, tornus pronounced, cell nearly one-half, produced apically, DC incurved, SC^1 free, SC^2 normal, R^1 stalked with SC^{2-5}, M^1 connate or short-stalked with R^3; hindwing with apex moderate, termen rather long, smooth, elbowed at R^3, tornus pronounced, inner margin long, base thinly scaled, subdiaphanous, cell rather short, DC slightly bent at origin of R^2, C closely approximated to cell for some distance in middle, then rather rapidly diverging, SC^2 stalked, R^2 from somewhat above middle of cell, M^1 stalked.

Fig. 8

Antenna of *Aporandria specularia*, Guenée, ♀

[1] Nom. indescr. et præocc. (Wagler, 1830, etc.).

Larva. — Slender, uniformly cylindrical, head strongly bifid, the lobes developed into erect horns; a slight conical prominence on eighth abdominal segment (Moore, *Lep. Ceyl.* Vol. 3, p. 425, t. 194, f. 1).

Pupa. — Rather narrow, thorax very oblique, abdomen minutely dark-speckled, spiracles pink (Moore, loc. cit.).

Type of genus : *Aporandria specularia* (Guenée) = *Geometra specularia*, Guenée (1804).

Geographical distribution of species. — Indo-Malayan.

1. *A. specularia* (Guenée). India with Ceylon to Sumatra and Sula Islands.
   Geometra specularia, Guenee, Spec. Gen. Lep. Vol. 9, p. 342 (1858).
   Aporandria specularia, Warren, Novit. Zool. Vol. 1, p. 385 (1894).

50. Genus RHODOCHLORA, Warren

Rhodochlora, Warren, Novit. Zool. Vol. 1, p. 485 (1894).

Characters. — Face somewhat prominent, smooth-scaled. Palpus long or longish, second joint rough-scaled, third joint elongate (at least in ♀), smoother scaled. Tongue developed. Antenna moderate, in ♂ bipectinate to near apex with moderate branches, apical extremity merely ciliated; in ♀ lamellate. Pectus and femora hairy. Hindtibia in ♂ not dilated, all spurs usually present, but unequal. Tarsi moderately spinulose. Abdomen not crested. Wings ample. Frenulum developed. Forewing with costa arched, apex moderately acute, termen nearly straight, somewhat oblique, tornus pronounced, cell less than one-half, DC incurved, oblique posteriorly, SC^1 free or anastomosing with C, SC^2 normal, R^1 stalked with SC^{2+5}, M^1 separate; hindwing with a subhyaline patch near base, apex roundly squared, termen rather straight to near R^4, there roundly prominent, thence again nearly straight to tornus, which is pronounced, cell short, SC^2 stalked, R^2 characteristic, M^1 separate.

Early stages unknown.

Differs from *Aporandria* in the absence of the frontal tuft, etc. The species are mostly very closely related inter se, and Mr. Druce, who possesses a magnificent series, considers most of them forms of one very variable species, more or less connected by intermediates. This will probably prove correct, in some cases at least; on the other hand, we have noted a few specimens as having apparently terminal spurs only on the hindtibia, so that there is still need for further study.

Type of the genus : *Rhodochlora roseipalpis* (Felder) = *Achlora roseipalpis*, Felder (1874).

Geographical distribution of species. — Tropical S. America.

1. *R. roseipalpis* (Felder). Panama, Venezuela, Ecuador, etc.
   Achlora roseipalpis, Felder, Reise Novara, Lep. Het. t. 127, p. 33 (1875).
   Rhodochlora roseipalpis, Warren, Novit. Zool. Vol. 1, p. 385 (1894).
   Rhodochlora roseipalpis var. *basicostalis*, Dognin, Ann. Soc. Ent. Belg. Vol. 44, p. 215 (1900) (ab.?).
2. *R. unicolor*, Warren (prace. ab.?). Peru.
   Rhodochlora unicolor, Warren, Novit. Zool. Vol. 14, p. 200 (1907).
3. *R. gaujoniaria* (Dognin). Ecuador.
   Achlora gaujoniaria, Dognin, Le Naturaliste, Vol. 14, p. 186 (1892).
4. *R. brunneipalpis*, Warren. British Guiana to Peru.
   Rhodochlora brunneipalpis, Warren, Novit. Zool. Vol. 1, p. 385 (1894).
   Rhodochlora brunneipalpis ab. *minor*, Warren, ibidem, Vol. 16, p. 87 (1909) (ab. vel var.?).
   Rhodochlora brunneipalpis ab. *rufaria*, Warren, ibidem, p. 87 (1909) (ab.).
5. *R. rothschildi*, Warren. Panama.
   Rhodochlora rothschildi, Warren, Novit. Zool. Vol. 8, p. 451 (1901).

6. *R. exquisita*, Warren. Peru.
Rhodochlora exquisita, Warren, Novit. Zool. Vol. 12, p. 320 (1905).
7. *R. albipuncta*, Warren. — **Pl. 2, Fig. 7.** Peru, Colombia.
Rhodochlora albipuncta, Warren, Novit. Zool. Vol. 16, p. 87 (1909).
8. *R. trifasciata*, Warren. Peru.
Rhodochlora trifasciata, Warren, Novit. Zool. Vol. 10, p. 88 (1900).
9. *R. ustimargo*, Warren. Peru.
Rhodochlora ustimargo, Warren, Novit. Zool. Vol. 16, p. 88 (1909).

51. Genus ANISOZYGA, Prout

Anisozyga (Turner, MS.), Prout, The Entomologist, Vol. 44, p. 26 (1911).
Anisogamia, Warren, Novit. Zool. Vol. 3, p. 286 (1896) (nec Saussure, 1893).
Eucyclodes (part.), Turner, Proc. Linn. Soc. N. S. Wales, Vol. 35, p. 615 (1910) (nec Warren).
Hamalolepis, Warren, MS. (in coll. Brit. Mus.) (cf. Swinhoe, Trans. Ent. Soc. Lond. 1902, p. 670, *Hemalolepis* in err., nom. indescr.).

Characters. — Face smooth. Palpus with second joint reaching beyond frons, rough-scaled (sometimes with strongly projecting hair-scales) above and beneath, third joint smooth, usually slightly fusiform, in ♂ moderate, in ♀ long. Tongue present. Antenna rather long, in ♂ shortly bipectinate to little beyond one-half, distally nearly simple, in ♀ nearly simple. Pectus extremely hairy, and usually with a very long pencil of hairs beneath base of forewing (**Pl. 5**). Femora strongly hairy. Hindtibia in ♂ with strong hair-pencil, and moderately long terminal process, both sexes with two unequal pairs of spurs. Abdomen not crested. Wings usually thinly scaled, the sexes often differing greatly in ornamentation. Frenulum fully developed. Forewing with costa arched, apex moderate, termen subcrenulate or waved, oblique posteriorly, cell nearly one-half, DC incurved, strongly oblique posteriorly, SC^1 usually free, SC^2 variable in position, but usually from but little before, very exceptionally even stalked to just after SC^5, R^1 separate, M^1 widely separate; hindwing with termen convex, typically crenulate, sometimes nearly smooth, but elbowed at R^3, inner margin long, cell short (one-third to two-fifths), DC^2 oblique, DC^3 slightly incurved anteriorly, oblique or strongly oblique outwards through most of its course, C approximated or appressed to cell to one-half or less, then very rapidly diverging, SC^2 stalked, R^2 very characteristic, M^1 nearly always stalked, M^2 from near end of cell (**Pl. 2, Fig. 14**). ♂ genitalia with uncus clubbed, spoon-shaped, slightly indented at the apex, socii shorter than uncus, gnathos terminating in a point, harpes with divided cucullus, clavus pointed, penis pestillate, broader at the tip, coremata present.

Larva. — Not fully described; provided with large flattened projections on both sides of the dorsum of each segment. That of *pieroides* feeds on roses. (Turner, *Proc. Linn. Soc. N. S. Wales*, Vol. 35, p. 615, 617).

Is at base a very natural genus, characterized by the combination of elongate, smooth third joint of palpus, long pectoral pencil of hair, strong tibial hair-pencil and process of ♂, long hindwing with short, obliquely-walled cell and stalking of radials, usually thin scaling and strong sexual dimorphism; but will probably need purifying by the removal of some outliers such as *montliata*, in which some of these characters are hardly developed. Turner sinks the genus to *Eucyclodes*, and if some of the forms are really intermediate that may perhaps prove inevitable for taxonomic purposes; we are unfortunately unacquainted with the type of *Eucyclodes*, but as Turner describes it as having minute terminal joint to the palpus, and apparently different discocellulars, and as its facies is distinct and there is no sexual dimorphism, we have preferred, for the present, not to merge the better-known genus.

Type of the genus : *Anisozyga pieroides* (Walker) = *Comibaena pieroides*, Walker (1896).

Geographical distribution of species. — Oceanian, with stragglers in Singapore and perhaps in India.

1. *A. pieroides* (Walker). — **Pl. 2, Fig. 5 ; Pl. 3, Fig. 1.** — Queensland to S. E. Australia.
   Comibaena pieroides, Walker, List Lep. Ins. Mus. Brit. Mus. Vol. 22, p. 580 (1861) (♂).
   Thalassodes scitissimaria, Walker, ibidem, Vol. 26, p. 1564 (1862) (♀).
   Comibaena calcinata, Felder, Reise Novara, Lep. Het. t. 127, f. 23 (1875) (♂).
   Iodis pieroides, Meyrick, Proc. Linn. Soc. N.S. Wales (2), Vol 2, p. 897 (1888).
   Anisogamia pieroides, Warren, Novit. Zool. Vol. 3, p. 287 (1896).
   Eucyclodes pieroides, Turner, Proc. Linn. Soc. N.S. Wales, Vol. 35, p. 617 (1910).
2. *A. pacifica* (Felder) (præc. var.?). — Fiji.
   Comibaena pacifica, Felder, Reise Novara, Lep. Het. t. 127, f. 24 (1875).
3. *A. insperata* (Walker). — E. to S. E. Australia.
   Thalassodes insperata, Walker, List Lep. Ins. Brit. Mus. Vol. 22, p. 555 (1861).
   Iodis insperata, Meyrick, Proc. Linn. Soc. N. S. Wales (2), Vol. 2, p. 895 (1888).
   Anisogamia insperata, Warren, Novit. Zool. Vol. 14, p. 147 (1907).
   Eucyclodes insperata, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 35, p. 622 (1910).
4. *A. metaspila* (Walker). — Queensland.
   Comibaena metaspila, Walker, List Lep. Ins. Brit. Mus. Vol. 22, p. 580 (1861).
   Iodis metaspila, Meyrick, Proc. Linn. Soc. N.S. Wales (2), Vol. 2, p. 895 (1888).
   Iodis eucalypti, Lucas, ibidem, Vol. 3, p. 1267 (1888).
   Euchloris metaspila, Lower, ibidem, Vol. 22, p. 29 (1897).
   Anisogamia metaspila, Warren, Novit. Zool. Vol. 4, p. 33 (1897).
   Eucyclodes metaspila, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 35, p. 624 (1910).
5. *A. saturataria* (Walker) (præc. ab.?). — Queensland (?).
   Chlorochroma saturataria, Walker, List Lep. Ins. Brit. Mus. Vol. 35, p. 1009 (1866).
   Iodis saturataria, Meyrick, Proc. Linn. Soc. N. S. Wales (2), Vol. 2, p. 895 (1888).
   Anisogamia saturataria, Warren, Novit. Zool. Vol. 4, p. 33 (1897).
   Eucyclodes saturataria, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 35, p. 625 (1910).
6. *A. gavissima* (Walker) (huj. gen.?). — India with Ceylon, Sarawak.
   Comibaena gavissima, Walker, List Lep. Ins. Brit. Mus. Vol. 22, p. 575 (1861).
   Berta gavissima, Moore, Lep. Ceyl. Vol. 3, p. 435, t. 166, f. 6 (1887).
   Thalassodes gavissima, Hampson, Fauna Ind. Moths, Vol. 3, p. 510 (1895).
   Gelasma gavissima, Swinhoe, Lep. Het. Oxford Mus. Vol. 2, p. 401 (1900).
7. *A. textilis* (Butler). — Darjiling 1).
   Thalera textilis, Butler, Ann. Mag. Nat. Hist. (5), Vol. 6, p. 210 (1880) ; Ill. Het. Coll. Brit. Mus. Vol. 6, p. 71, t. 117, f. 10 (1886).
   Comibaena textilis, Cotes & Swinhoe, Cat. Moths Ind. (4), p. 524 (1888).
   Thalassodes textilis, Hampson, Fauna Ind. Moths, Vol. 3, p. 510 (1895).
   Chlorostrota textilis, Warren, Novit. Zool. Vol. 4, p. 389 (1897).
8. *A. aphrias* (Meyrick). — British New Guinea.
   Iodis aphrias, Meyrick, Trans. Ent. Soc. Lond. p. 492 (1889).
   Anisogamia aphrias, Warren, Novit. Zool. Vol. 14, p. 127 (1907).
9. *A. lithrocrossa* (Meyrick). — New Guinea.
   Iodis lithrocrossa, Meyrick, Trans. Ent. Soc. Lond. p. 493 (1889).
   Anisogamia lithrocrossa, Warren, Novit. Zool. Vol. 16, p. 124 (1909).
10. *A. speciosa* (Lucas). — Queensland and British New Guinea, ?Singapore.
    Iodis speciosa, Lucas, Proc. Linn. Soc. N. S. Wales (2), Vol. 4, p. 1094 (1890) (♀).
    Euchloris chionoplaca, Lower, Trans. Roy. Soc. S. Austral. Vol. 17, p. 288 (1893) (♂).

1) False locality, or accidental introduction (?).

Anisogamia albimacula, Warren, Novit. Zool. Vol. 4, p. 33 (1897).
Iodis sideralis, Lucas, Proc. Roy. Soc. Queensl. Vol. 13, p. 68 (1898) (♂).
Anisogamia chionoplaca, Warren, Novit. Zool. Vol. 10, p. 355 (1903).
Eucyclodes speciosa, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 35, p. 620 (1910).

11. *A. goniota* (Lower). — N. Queensland.
Euchloris goniota, Lower, Trans. Roy. Soc. S. Austral. Vol. 18, p. 86 (1894).
Anisogamia curvigutta, Warren, Novit. Zool. Vol. 4, p. 34 (1897).
Anisogamia goniota, Warren, ibidem, Vol. 10, p. 355 (1903).

12. *A. fascinans* (Lucas). — Queensland.
Iodis fascinans, Lucas, Proc. Linn. Soc. N. S. Wales (2), Vol. 8, p. 134 (1894).

13. *A. absona* (Warren) (præc. var.?). — New Guinea to Trobriand Islands.
Anisogamia absona, Warren, Novit. Zool. Vol. 3, p. 287 (1896).

14. *A. albilauta* (Warren). — British and Dutch New Guinea.
Anisogamia albilauta, Warren, Novit. Zool. Vol. 4, p. 33 (1897).
Chloroteras albilauta, Warren, MS. (Swinhoe, Trans. Ent. Soc. Lond. 1902, p. 676).

15. *A. dentata* (Warren). — N. Queensland, ? New Guinea.
Anisogamia dentata, Warren, Novit. Zool. Vol. 4, p. 34 (1897).
Eucyclodes dentata, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 35, p. 617 (1910).

16. *A. moniliata* (Warren). — N. Queensland, British New Guinea to Louisiades.
Anisogamia moniliata, Warren, Novit. Zool. Vol. 4, p. 34 (1897) (♀).
Anisogamia undilinea, Warren, ibidem, p. 35 (1897) (♂).
Eucyclodes moniliata, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 35, p. 623 (1910).

17. *A. muscosa* (Warren). — Fergusson Isl.
Anisogamia muscosa, Warren, Novit. Zool. Vol. 4, p. 35 (1897).

18. *A. nigrimaculata* (Warren). — British and Dutch New Guinea.
Anisogamia nigrimaculata, Warren, Novit. Zool. Vol. 4, p. 35 (1897).
Chloroteras nigromaculata, Warren, MS. [1]).

19. *A. sublituata* (Warren). — British New Guinea.
Anisogamia sublituata, Warren, Novit. Zool. Vol. 6, p. 327 (1899).

20. *A. subvenusta* (Warren). — British New Guinea.
Anisogamia subvenusta, Warren, Novit. Zool. Vol. 6, p. 328 (1899).

21. *A. pagenstecheri* (Semper). — Luzon.
Anisogama pagenstecheri, Semper, Reisen Philipp. (2), Vol. 6, p. 640, t. 65, f. 11 (1902).

22. *A. albifimbria* (Warren). — Solomon Islands.
Anisogamia albifimbria, Warren, Novit. Zool. Vol. 10, p. 262 (1903); Vol. 12, p. 421 (1905).

23. *A. coerulea* (Warren) (huj. gen.?). — British to Dutch N. Guinea.
Anisogamia coerulea, Warren, Novit. Zool. Vol. 10, p. 354 (1903).

24. *A. rufipunctata* (Warren). — British New Guinea.
Anisogamia rufipunctata, Warren, Novit. Zool. Vol. 10, p. 354 (1903).

25. *A. callisticta* (Turner). — N. Queensland.
Euchloris callisticta, Turner, Trans. Roy. Soc. S. Austral. Vol. 28, p. 222 (1904).
Eucyclodes callisticta, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 35, p. 621 (1910).

26. *A. albifusa* (Warren). — British New Guinea.
Anisogamia albifusa, Warren, Novit. Zool. Vol. 13, p. 77 (1906).

27. *A. albiseriata* (Warren). — British New Guinea.
Anisogamia albiseriata, Warren, Novit. Zool. Vol. 13, p. 78 (1906).

1) So given on type label, not *Chrysochloroma*, as Swinhoe indicates (*Trans. Ent. Soc. Lond.*, 1902, p. 676).

28. *A. batis* (Warren). — British New Guinea.
Anisogamia batis, Warren, Novit. Zool. Vol. 13, p. 78 (1906).

29. *A. commaculata* (Warren). — British New Guinea.
Anisogamia commaculata, Warren, Novit. Zool. Vol. 13, p. 78, t. 10, f. 11 (1906).

30. *A. decorata* (Warren). — British New Guinea.
Anisogamia decorata, Warren, Novit. Zool. Vol. 13, p. 79 (1906).

31. *A. flavilinea* (Warren). — British New Guinea.
Anisogamia flavilinea, Warren, Novit. Zool. Vol. 13, p. 80 (1906).
Anisogamia flavilinea ab. *albinata*, Warren, ibidem, p. 80 (1906) (ab.).

32. *A. griseonotata* (Warren). — British New Guinea.
Anisogamia griseonotata, Warren, Novit. Zool. Vol. 13, p. 80 (1906).

33. *A. iridescens* (Warren). — British New Guinea.
Anisogamia iridescens, Warren, Novit. Zool. Vol. 13, p. 81 (1906).

34. *A. scintillans* (Warren). — British New Guinea.
Anisogamia scintillans, Warren, Novit. Zool. Vol. 13, p. 81 (1906).

35. *A. seminivea* (Warren) 1). — British New Guinea.
Anisogamia seminivea, Warren, Novit. Zool. Vol. 13, p. 82 (1906).

36. *A. triseriata* (Warren). — British New Guinea.
Anisogamia triseriata, Warren, Novit. Zool. Vol. 13, p. 82 (1906).

37. *A. viridissima* (Warren). — British New Guinea.
Anisogamia viridissima, Warren, Novit. Zool. Vol. 13, p. 82 (1906).

38. *A. bijugata* (Warren). — British New Guinea.
Anisogamia bijugata, Warren, Novit. Zool. Vol. 14, p. 126 (1907).

39. *A. desolata* (Warren). — British New Guinea.
Anisogamia desolata, Warren, Novit. Zool. Vol. 14, p. 126 (1907).

40. *A. fragmentata* (Warren). — British and Dutch New Guinea.
Anisogamia fragmentata, Warren, Novit. Zool. Vol. 14, p. 127 (1907).

41. *A. gracililinea* (Warren). — British New Guinea.
Anisogamia gracililinea, Warren, Novit. Zool. Vol. 14, p. 127 (1907).

42. *A. hilaris* (Warren). — British New Guinea.
Anisogamia hilaris, Warren, Novit. Zool. Vol. 14, p. 128 (1907).

43. *A. innuba* (Warren). — British New Guinea.
Anisogamia innuba, Warren, Novit. Zool. Vol. 14, p. 128 (1907).

44. *A. orbimaculata* (Warren). — British New Guinea.
Anisogamia orbimaculata, Warren, Novit. Zool. Vol. 14, p. 129 (1907).

45. *A. stellata* (Warren). — British New Guinea.
Anisogamia stellata, Warren, Novit. Zool. Vol. 14, p. 129 (1907).

46. *A. submigrata* (Warren). — British New Guinea.
Anisogamia submigrata, Warren, Novit. Zool. Vol. 14, p. 130 (1907).

47. *A. veniplaga* (Warren). — British New Guinea.
Anisogamia veniplaga, Warren, Novit. Zool. Vol. 14, p. 130 (1907).

48. *A. sexmaculata* (Warren). — British New Guinea.
Phorodesma sexmaculata, Warren, Novit. Zool. Vol. 14, p. 134 (1907).

49. *A. subfasciata* (Warren). — Solomon Islands.
Anisogamia subfasciata, Warren, Novit. Zool. Vol. 16, p. 124 (1909).

50. *A. erotyla* (Turner) (huj. gen. ?). — Queensland.
Eucyclodes erotyla, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 35, p. 622 (1910).

51. *A. erymnodes* (Turner). — N. Queensland.
Eucyclodes erymnodes, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 35, p. 623 (1910).

52. *A. exililinea* (Warren) (huj. gen. ?). — British New Guinea.
Rhomborista exililinea, Warren, Novit. Zool. Vol. 13, p. 89 (1906).
Anisozyga exililinea, Prout, The Entomologist, Vol. 44, p. 26 (1911).

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1) This species, *sexmaculata*, and perhaps a few others lack the hindtibial process of the ♂, but seem otherwise to accord with the genus.

53. *A. vagilinea*, Prout (huj. gen. ?). Dutch New Guinea.
Anisozyga vagilinea, Prout, The Entomologist, Vol. 44, p. 26 (1911).
54. **A. polyleucotes, nov. sp.** 1), Prout. Dutch New Guinea.
55. **A. diazeuxis, nov. sp.** 2), Prout. Dutch New Guinea.

52. Genus EUCYCLODES, Warren

Eucyclodes. Warren, Novit. Zool. Vol. 1, p. 390 (1894).

Characters. — Face smooth (?) 3). Palpus rather short, terminal joint short in both sexes. Tongue present. Antenna in ♂ bipectinate with short branches, apex simple; in ♀ simple. Pectus densely hairy. Hindtibia in ♂ dilated with hair-pencil and terminal process, in both sexes with all spurs. Abdomen not crested. Wings thickly scaled. Frenulum fully developed. Forewing with costa almost straight, apex blunt, termen rounded, DC strongly incurved, oblique posteriorly, SC^1 free, SC^{2-5} stalked, R^1 connate, M^1 well separate; hindwing with termen well rounded, tornus prominent, DC^2 oblique, DC^3 slightly incurved, becoming strongly oblique, SC^2 stalked, M^1 short-stalked.

Early stages unknown.

The above characters are drawn from Meyrick, Warren and Turner; see our note to the preceding genus. The early stages will perhaps throw further light on the degree of its affinity with *Anisozyga*.

Type of the genus : *Eucyclodes buprestaria* (Guenée) = *Phorodesma buprestaria*, Guenée (1894).

Geographical distribution of species. — S. E. Australia with Tasmania.

1. *E. buprestaria* (Guenée). S. E. Australia with Tasmania.
Phorodesma buprestaria, Guenée, Spec. Gén. Lép. Vol. 9, p. 371, t. 7, f. 4 (1858).
Comibaena buprestaria, Walker, List Lep. Ins. Brit. Mus. Vol. 22, p. 579 (1861).
Iodis buprestaria, Meyrick, Proc. Linn. Soc. N. S. Wales (2), Vol. 2, p. 800 (1888).
Eucyclodes buprestaria, Warren, Novit. Zool. Vol. 1, p. 390 (1894).

1) **Anisozyga polyleucotes, nov. sp.** ♂, 38 mm. Face green above, white below. Palpus bright golden orange, beneath and at extreme tip white. Head white, mixed with green on crown. Antennal shaft ochreous, each segment narrowly margined with white. Thorax above green, mixed with white, beneath white; the long hair-tuft white. Abdomen white, dorsally mixed with green, a green saddle at base. Forewing with termen crenulate; white (subdiaphanous) marked with bright green; the green markings, which are all more or less irrorated or spotted with white, consist of an extended costal patch from base to nearly two-fifths, and from costa to submedian fold; a few marks opposite this on inner margin; an interrupted band, averaging 3 mm. in width, from costa to M^2, its proximal edge at a little before one-half, both edges strongly dentate, a deep distal indentation in middle causing it to be much constricted just in front of R^3; a small blotch opposite this band on inner margin; a narrow much interrupted subterminal band which throws out projections distad along the veins tending to meet the terminal line and enclose white spots; a very ill-defined, much interrupted line at a short distance before the subterminal band; a terminal line, strongly interrupted at the vein ends; fringe white, marked with green. Hindwing with termen strongly crenulate; white, much dotted with green, especially on veins and along inner margin; an elongate, raised white cell-mark along DC^2, to which follows a green band which is moderately broad in costal half, but narrows, becomes much interrupted and almost vanishes towards inner margin; a very faint smoky blotch at apex, containing some large green spots; a small green patch between R^1 and R^2 adjoining this blotch; subterminal band and terminal line much as in forewing. Underside with the green markings much weaker, but with some slight brown markings near apex of forewing, and a strong fuscous blotch at apex of hindwing. Fak-Fak, 1700 feet, Dutch New Guinea, Dec. 1907 (A. E. Pratt). Type in coll. L. B. Prout. A second ♂, precisely similar and with same data, in coll. Brit. Mus.

2) **Anisozyga diazeuxis, nov. sp.** ♂♀, 26-28 mm. Face green above, white below. Palpus olive-green on the outer side, white within and below and at the ends of the segments. Vertex green, collar partly white. Antennal shaft whitish, spotted with reddish fuscous; pectinations reddish fuscous. Thorax green above, white beneath, the long hair-tuft green (sometimes very pale). Foreleg bright ochreous, belted with white. Abdomen above green, spotted with white. Forewing rather short and broad, termen not very oblique, weakly crenulate; bright green, speckled with white; costal edge reddish fuscous, spotted with white; markings white; antemedian line rather thick, from a snowy spot at one-third costa, becoming indistinct beyond vein M; postmedian more slender, strongly dentate, somewhat interrupted, from costa at nearly three-fourths, inbent towards inner margin so as to approach antemedian; a line of spots of unequal sizes midway between postmedian and termen, that between R^3 and M^1 the largest; a similar series (but smaller) close to termen, likewise intraneural; a series of white spots at vein-ends; fringe green, greyer distally. Hindwing with termen evenly crenulate from R^1 to tornus; DC^3 becoming extremely oblique, M^1 rather widely separate; basal half largely occupied with large white spots; a thick strongly dentate line beyond middle (3 mm. from termen); two subterminal series of white intraneural spots, larger and more regular than on forewing; terminal dots and fringe as in forewing, tips of fringe white at ends of teeth (perhaps worn off in forewing). Underside paler, much more weakly marked; fuscous costal markings rather broader, termen and fringe marked with fuscous from apex about to R^2 (gradually fading out). Fak-Fak, Dutch New Guinea, 1700 feet, Dec. 1907 to Feb. 1908 (A. E. Pratt). Type (♂) and cotype (♀) in coll. L. B. Prout. Two ♂♂, same data, in coll. Brit. Mus. A very commonplace looking little species, quite similar to *callisticta*, Turner, but remarkable for the wide separation of M^1 of hindwing, which is usually stalked in the genus, exceptionally about connate, or very rarely just separate.

3) Warren says « with a small triangular horny projection above », but Turner writes us that this is inappreciable in his example.

53. Genus CHLOROMACHIA, Warren

Chloromachia. Warren, Novit. Zool. (Vol. 4, p. 209, indescr.), Vol. 6, p. 329 (1899).
Galactochlora. Warren, ibidem, Vol. 14, p. 133 (1907).

Characters. — Face smooth. Palpus in ♂ moderate, in ♀ long, second joint stout, densely rough-scaled, third joint smooth, in ♂ small, in ♀ long. Tongue present. Antenna in ♂ dentate, with fascicles of cilia, in ♀ with minute cilia (Section I), or similar to those of the ♂ (Section II). Pectus densely hairy. Femora hairy. Hindtibia in ♂ usually dilated with strong hair-pencil. But without the terminal process of typical *Anisozyga*. Abdomen not crested. Frenulum fully developed. Forewing with costa arched, apex moderate, termen somewhat waved, or entire, rounded, becoming oblique posteriorly (straighter in Section II), cell short, DC incurved, SC^1 free, SC^2 normal, R^1 connate or approximated, rarely stalked, M^1 separate; hindwing with apex rounded off, termen more or less crenulate (except in Section II), bluntly toothed at R^3, tornus pronounced, inner margin long, cell short (scarcely over one-third), DC^3 slightly incurved anteriorly, becoming rather oblique (much less so than in typical *Anisozyga*), C shortly approximated to cell, then rapidly diverging, SC^2 stalked, R^2 from much above middle of DC, M^1 stalked.

Early stages unknown.

Differs little from *Anisozyga* except in the ♂ antenna and the less oblique discocellulars of the hindwing. The type-species is subject to a closely parallel sexual dimorphism to that of typical *Anisozyga*.

Type of the genus : *Chloromachia divapala* (Walker) *Comibaena divapala*, Walker (1890).

Geographical distribution of species. — India to Malaysia, Japan.

Section I. — Forewing with termen bent, hindwing crenulate, ♂ hindtibia strongly dilated, forewing with R^1 connate to separate (*Chloromachia*, Warren).

1. *C. divapala* (Walker).

a. *Chloromachia divapala divapala*. — India with Ceylon and Andamans, ? China.
Comibaena divapala, Walker, List Lep. Ins. Brit. Mus. Vol. 22, p. 575 (1891).
Combiaena divapala, Moore Lep. Ceyl. Vol. 3, p. 434, t. 195, f. 2 (1887).
Thalassodes divapala, Hampson, Fauna Ind. Moths, Vol. 3, p. 510 (1895).
Chloromachia divapala, Warren, Novit. Zool. Vol. 4, p. 209 (1897).
Gelasma divapala, Swinhoe, Lep. Het. Oxford Mus. Vol. 2, p. 401 (1900).

b. *Chloromachia divapala albisparsa*. — Singapore, Borneo, ? Amboina.
Thalera albisparsa, Walker, List Lep. Ins. Brit. Mus. Vol. 22, p. 600 (1891).
? *Comibaena albiceps*, Felder, Reise Novara, Lep. Het. t. 127, f. 13 (1875).
? *Phorodesma concinnata*, Pagenstecher, Lep. Amboina, p. 87 (1884).
? *Chloromachia divapala rufimargo*, Warren, Novit. Zool. Vol. 4, p. 209 (1897).
? *Gelasma rufimargo*, Swinhoe, Trans. Ent. Soc. Lond. p. 675 (1902).

Section II. — Forewing with termen almost straight, hindwing not crenulate, ♂ hindtibia scarsely dilated [1]), forewing with R^1 connate to short-stalked (*Galactochlora*, Warren).

2. *C. pulchella* (Warren). — New Guinea, Ron Isl.
Chlocaemis pulchella, Warren, Novit. Zool. Vol. 6, p. 281 (1899).
Chloromachia? *pallidata*, Warren, ibidem, p. 329 (1899) (nov. syn.).
Galactochlora arrostrata, Warren, ibidem, Vol. 14, p. 133 (1907) (nov. syn.).

1) Warren, in erecting the genus *Galactochlora*, overlooked the median spurs, which are quite short, and approximated to the terminal

54. Genus LOPHOMACHIA, nov. gen., Prout

Lophomachia, nov. gen. Prout.

Characters. — Face smooth. Palpus moderate, second joint rough-scaled above and beneath, third joint smooth, exposed, in both sexes moderate. Tongue present. Antenna in ♂ with long, strong serrate teeth, bearing minute cilia, in ♀ almost simple. Pectus and femora densely hairy. Hindtibia in ♂ dilated, with hair-pencil and shortish to moderate terminal process, in both sexes with all spurs. Metathorax and abdomen strongly crested. Frenulum fully developed. Forewing with costa arched, apex moderate, termen more or less crenulate, bowed, oblique, cell less than one-half, DC incurved or inangled, SC^1 from near apex of cell (in *semialba* sometimes connate with SC^{2-5}), always well free, SC^5 from before (or exceptionally just after) SC^2, R^1 connate or closely approximated, M^1 connate or approximated; hindwing with costa short, apex rounded, termen very long, usually crenulate, always bent at R^3, tornus pronounced, inner margin long, cell short, DC slightly curved, not very oblique, C approximated to cell till towards one-half, then rapidly diverging, SC^2 stalked, R^2 characteristic, M^1 stalked.

Larva. — Prothorax, metathorax and first abdominal segment with small subdorsal protuberances, third and fourth abdominals with long, pointed protuberances, tenth abdominal with a point; on *Loranthus* (Moore, *Lep. Ceyl.* Vol. 3, p. 434).

Pupa. — Greenish, thickly covered with minute purple-brown speckles (Moore, loc. cit.).

Differs essentially from *Chloromachia* in the dorsal crests. The difference in subcostal venation, though also not unimportant, is less constant.

Type of the genus : *Lophomachia semialba* (Walker) = *Thalera semialba*, Walker.

Geographical distribution of species. — India, Singapore, Borneo.

1. *L. semialba* (Walker). — Ceylon, Singapore, Borneo.
   Thalera semialba, Walker, List Lep. Ins. Brit. Mus. Vol. 22, p. 601 (1861).
   Comibaena semialba, Moore, Lep. Ceyl. Vol. 3, p. 434, t. 196, f. 1, 1*a* (1887).
   Thalassodes semialba, Hampson, Fauna, Ind. Moths. Vol. 3, p. 511 (1895).
   [*Chloromachia*] *semialba*, Warren, Novit. Zool. Vol. 4, p. 209 (1897).
   Gelasma semialba, Swinhoe, Lep. Het. Oxford Mus. Vol. 2, p. 402 (1900).
2. *L. picturata* (Hampson). — **Pl. 2, Fig. 8.** — Ceylon, Bombay.
   Thalassodes picturata, Hampson, Journ. Bombay Nat. Hist. Soc. Vol. 14, p. 655, t. C, f. 7 (1903).
3. *L. discipennata* (Walker). — Borneo.
   Thalera discipennata, Walker, List Lep. Ins. Brit. Mus. Vol. 22, p. 600 (1861).
   Gelasma discipennata, Swinhoe, Lep. Het. Oxford Mus. Vol. 2, p. 402, t. 6, f. 6 (1900).
4. *L. aureofulva* (Warren) (huj. gen. ?) [1]. — Khasis.
   Chloromachia aureofulva, Warren, Novit. Zool. Vol. 4, p. 209, t. 5, f. 20 (1897).
   Thalassodes aureofulva, Hampson, Journ. Bombay Nat. Hist. Soc. Vol. 14, p. 656 (1903).

55. Genus VICTORIA, Warren

Victoria. Warren, Novit. Zool. Vol. 4, p. 46 (1897).

Characters. — Face rough-scaled. A strong tuft at base of antenna (slight in *gordoni* and *immunifica*). Palpus moderate to long, second joint moderately rough-haired, third joint smoother-scaled,

[1] Male antenna simply ciliated, teste Warren.

in ♂ shortish to moderate, in ♀ moderate (*albipicta*) to long. Tongue absent or vestigial. Antenna short, in ♂ bipectinate to beyond one-half with long branches, in ♀ with shorter branches. Pectus and femora densely hairy. Hindtibia in ♂ (?), in ♀ with all spurs. Thorax densely clothed above, metathorax usually especially so, but without clearly differentiated crest. Abdomen strongly crested. Build robust. Frenulum strong in ♂, present but weak in ♀. Forewing with costa straight proximally, rather strongly arched distally, apex acute, termen crenulate, prominent at R^5, cell one-half, DC^3 incurved, SC^1 free, SC^2 normal, R^1 connate or approximated, M^1 just separate; hindwing with apex rounded, termen toothed at vein-ends, especially at R^1 and R^3, tornus prominent, cell rather less than one-half, DC^3 somewhat incurved, hardly oblique, C briefly anastomosing with cell, gradually diverging at first, but soon rapidly, SC^2 stalked, M^1 short-stalked or separate.

Early stages unknown.

There is just a suspicion of the basal costal expansion of the hindwing in this and the following genus, and some weakening of the ♀ frenulum, showing an advance in the evolution towards Group V; they may be nearly in the line of ancestry of the group of robust, crested African genera which we refer there (*Heterocrita*, *Bathycolpodes*, etc.), but we consider the present their best position.

Type of the genus : *Victoria albipicta*, Warren (1807).

Geographical distribution of species. — Ethiopian.

1. *V. albipicta*, Warren. — S. Africa.
   Victoria albipicta, Warren, Novit. Zool. Vol. 4, p. 46 (1807).
2. *V. fuscithorax*, Warren. — Uganda, Sudan.
   Victoria fuscithorax, Warren, Novit. Zool. Vol. 12, p. 387 (1905).
3. **V. gordoni, nov. sp.** 1), Prout. — Pl. 3, Fig. 2. — Old Calabar.
4. **V. immunifica, nov. sp.** 2), Prout. — Sierra Leone, S. Nigeria.
5. *V. mirabilis*, Warren. — Natal.
   Victoria mirabilis, Warren, Ann. S. Afric. Mus. Vol. [illegible], p. 10 (1911).

56. Genus ARCHICHLORA, Warren

Archichlora. Warren, Novit. Zool. Vol. 5, p. 11 (1898).
Chloroteras. Warren, ibidem, Vol. 8, p. 8 (1901).

1) **Victoria gordoni, nov. sp.** — ♂, 45 mm. Face reddish brown, not very rough scaled. Palpus brownish fuscous, paler beneath. Vertex white; occiput green; tuft at base of antenna slight. Thorax green above, pale beneath. Abdomen pale brownish, the dorsal crests fuscous, not strongly developed. Wings thinly and smoothly scaled, somewhat hyaline with iridescent reflections. Forewing sea green with costa narrowly light brown, fuscous-speckled; a darker, more opaque patch at base; a scarcely perceptibly darkened, irregular submarginal band, preceded by irregularly placed white vein-dots; a roundish, pale-margined and minutely pale pupilled, deep fuscous discal mark, a large, irregularly oval, deep fuscous blotch between M^1 and SM^2 close to tornus; terminal line deep fuscous, with pale dots at the ends of the veins; fringe light green proximally, fuscous distally. Hindwing similar, but without the basal patch and tornal blotch, discal spot rather larger, subterminal shade interrupted between R^3 and M^1. Underside still paler green, the dark discal marks somewhat reduced with broader pale circumscription, the subterminal band boldly marked in fuscous, and throwing out fuscous lines along the veins to termen; tornal blotch of forewing as above. S. Nigeria, Old Calabar, 150 feet, January 10th 1902 (C. J. M. Gordon). Type in Oxford Museum, presented by the captor. An absolutely typical *Victoria* except in the few slight details of structure noted above; yet very distinct in the smooth scaling, and in the dark tornal blotch. The type is in beautiful condition.

2) **Victoria immunifica, nov. sp.** — ♀, 40 mm. Face crimson. Palpus fuscous crimson above, first and second joints whitish beneath, third joint long, ochreous beneath. Antennal shaft ochreous, marked with crimson above, mixed with fuscous proximally; pectinations ochreous. Vertex crimson, spotted with blackish fuscous; occiput green. Fore- and middlelegs ochreous, crimson above; hindleg whitish, with the tarsus ochreous. Thorax green above. Abdomen white, flushed with pale crimson above and sparsely speckled with fuscous; crests well developed, yellow, mixed with fuscous. Forewing bluish green, costa broadly crimson, heavily spotted with blackish fuscous, distally more ochreous; a blackish mark projecting from costal shade near base; antemedian line whitish, indistinct, lunulate, with a small tooth on SM^2 from inner margin at two-fifths becoming obsolete on entering cell; discal mark round, crimson-fuscous, pale-centred, postmedian line whitish, almost obsolete, midway between cell-spot and termen, parallel with latter, indicated chiefly by a few white vein-dots; terminal line fine, fuscous interrupted at vein ends; fringe white, flushed with pale crimson, and strongly marked with fuscous excepting a pale basal line. Hindwing similar, without costal markings and antemedian. Underside whitish green, costa more ochreous than above, less speckled, discal marks faintly indicated, but small, not pale centred; fringe paler than above, but similar. Sierra Leone (C. R. Bartlett). Type in coll. Brit. Mus. A ♂ from Ilesha, S. Nigeria (L. F. H. Humfrey), also in coll. Brit. Mus., is practically certainly conspecific, although as the locality is different we have omitted reference to it in the diagnosis. Its abdomen, antennal shaft, vertex and costa are more heavily mixed with fuscous, and the postmedian line on both wings is accompanied proximally by distinct fuscous dashes on the veins, of which there are only one or two faint suggestions in the type. The third palpal joint is of course much shorter, and the antennal pectinations considerably longer than in the ♀. In both sexes the metathorax is smooth, and the tuft of scales at base of antenna quite slight. M^1 of hindwing is well stalked. In the ♂ the hindtibia is dilated with hair-pencil.

Characters. — Face smooth. Palpus in both sexes quite short. Tongue usually weak (well developed in *pulveriplaga*). Antenna not tufted at base, in both sexes bipectinate, with apex simple. Pectus densely hairy. Femora hairy. Hindtibia in ♂ usually dilated with hair-pencil, in both sexes with all spurs, the median sometimes short. Metathorax not crested. Abdomen strongly crested. Frenulum in ♂ moderately strong, from before a scarcely appreciable costal expansion, in ♀ apparently rudimentary. Build robust. Forewing with costa straight, except at base and apex, apex more or less prominent, termen elbowed in middle, oblique posteriorly (variable in other respects), cell nearly one-half, DC deeply incurved, SC^1 free (in *zonata* anastomosing strongly with C and with SC^2), SC^2 normal, R^1 connate to short-stalked (in *zonata* separate) M^1 separate, connate or stalked; hindwing with apex moderate or a little truncate, termen toothed, with the strongest teeth at R^1 and R^3, or merely waved, with a rather strong tooth at R^1 and a very slight one at R^3, tornus pronounced, cell less than one-half, DC^3 incurved, C anastomosing at a point or very shortly with SC near base, then a little approximated before diverging strongly (in *zonata* approximated to fully one-half cell), SC^2 stalked, R^2 from considerably above middle of DC, M^1 connate or stalked (in *zonata* separate).

Early stages unknown.

A further development from *Victoria* distinguished by the short (in Section II absolutely minute) palpus, the still weaker ♀ frenulum, etc.; but it can hardly be in an absolutely direct line of descent, on account of the tongue.

Type of the genus : *Archichlora viridimacula*, Warren (1898).

Geographical distribution of species. — Æthiopian.

SECTION I. — Palpus not excessively minute, build usually very robust, termen usually not crenulate (*Archichlora*, Warren).

1. *A. viridimacula*, Warren. — **Pl. 5, Fig. 8.** — W. Africa.
   Archichlora viridimacula, Warren, Novit. Zool. Vol. 5, p. 12 (1898).
   Victoria viridimacula, Swinhoe, Trans. Ent. Soc. Lond. p. 551 (1904).
2. *A. marginata* (Warren). — Nigeria, Ashanti.
   Victoria marginata, Warren, Novit. Zool. Vol. 9, p. 407 (1902).
3. *A. marcescens*, Warren. — Nigeria.
   Archichlora marcescens, Warren, Novit. Zool. Vol. 11, p. 465 (1904).
4. *A. pulveriplaga* (Warren). — Nigeria.
   Oospila pulveriplaga, Warren, Novit. Zool. Vol. 5, p. 14 (1898).
   Victoria pulveriplaga, Warren, ibidem, Vol. 8, p. 8 (1901).
5. *A. ansorgei* (Warren). — Uganda.
   Victoria ansorgei, Warren, Novit. Zool. Vol. 8, p. 8 (1901).
6. *A. peromata* (Warren) (sect. sequ. ?). — Nigeria.
   Victoria peromata, Warren, Novit. Zool. Vol. 5, p. 237 (1898).

SECTION II. — Palpus excessively minute, build not very robust, termen crenulate (*Chloroteras*, Warren).

7. *A. devoluta* (Walker). — W. Africa.
   Comibaena devoluta, Walker, List Lep. Ins. Brit. Mus. Vol. 22, p. 572 (1861).
   Chloroteras devoluta, Warren, Novit. Zool. Vol. 8, p. 8 (1901).
   Victoria devoluta, Swinhoe, Trans. Ent. Soc. Lond. p. 551 (1904).

SECTION III. — Palpus not excessively minute, termen not crenulate, forewing with SC^1 anastomosing strongly with C and SC^2, hindwing with C approximated to cell to one-half (gen. div. ?).

8. *A. zonata* (Walker). — S. Africa.
   Comibaena zonata, Walker, List Lep. Ins. Brit. Mus. Vol. 26, p. 1566 (1862).

57. Genus CHLORODES, Guenée

Chlorodes. Guenée, Spec. Gén. Lép. Vol. 9, p. 378 (1858).

Characters. — Face smooth. Palpus moderate, second joint rough-scaled above and beneath, third joint in both sexes small. Tongue present. Antenna about one-half, in ♂ bipectinate to near apex with moderate branches, in ♀ subserrate, minutely ciliated. Pectus and femora somewhat hairy. Hindtibia in ♂ not dilated, in both sexes with all spurs. Abdomen not crested. Frenulum present in both sexes. Forewing with costa arched distally, apex acute, termen entire, oblique, scarcely convex, tornus rather pronounced, cell about one-half. DC somewhat incurved, SC^1 from cell, usually anastomosing with C, sometimes also with SC^2, SC^2 normal, R^1 short-stalked, M^1 well separate; hindwing with costa not shortened, apex rounded, termen subcrenulate, prominent at R^1, bluntly toothed at R^3, tornus roundly produced, cell less than one-half, DC^2 slightly oblique, DC^3 slightly incurved, then oblique outwards, C approximated to cell to nearly one-half, rather gradually diverging, SC^2 stalked, M^1 just separate.

Larva. — With subdorsal processes much as in *Hipparchus*, *Anisozyga*, *Lophomachia*, etc. (Turner, *Proc. Linn. Soc. N. S. Wales*, Vol 35, p. 626).

Type of the genus : *Chlorodes boisduvalaria* (Le Guillou) (1858).

Geographical distribution of species. — Australian.

1. *C. boisduvalaria* (Le Guillou). S. E. Australia, Tasmania.

[N. gen.] *boisduvalaria*, Le Guillou, Rev. Zool. Vol. 4, p. 257 (1841).
Chlorodes mirandaria, Guenée, Spec. Gén. Lép. Vol. 9, p. 379, t. 5, f. 7 (1858).
Iodis boisduvalaria, Meyrick, Proc. Linn. Soc. N. S. Wales (2), Vol. 2, p. 802 (1888).
Chlorodes boisduvalaria, Swinhoe, Lep. Het. Oxford Mus. Vol. 2, p. 307 (1900).

58. Genus OPISTHOTIA, Warren

Opisthotia. Warren, Novit. Zool. Vol. 1, p. 380 (1894).

Characters. — Face smooth. Palpus in ♂ moderate, second joint moderately rough-scaled, third joint rather small (in ♀?). Tongue developed. Antenna rather short, in ♂ bipectinate to near apex with rather short branches. Pectus hairy. Femora somewhat hairy (?). Hindtibia in ♂ dilated with hair-pencil, four rather stout spurs, the terminal rather short. Hindtarsus rather short and thick. Abdomen crested. Frenulum developed. Forewing with costa slightly arched, apex moderate, termen curved, faintly waved, tornus rather pronounced, cell less than one-half, DC incurved, SC^1 free, SC^2 stalked to considerably beyond SC^5, R^1 connate or approximated, M^1 separate; hindwing with apex rounded, termen with a slightly projection at R^3 and a still slighter at R^1, rather straight from R^3 to near tornus, tornus produced to a rounded lobe, inner margin rather long, cell short, DC oblique, usually rather direct, occasionally with DC^3 somewhat incurved anteriorly, C approximated to SC in second fourth of cell, then rapidly diverging, SC^2 stalked, R^2 from near R^1, M^1 separate.

Early stages unknown.

Except in the crested abdomen, and the position of SC^2 of forewing, differs little from the preceding and following genera. Its shape differs from both, as does also the dilated hindtibia. From *Ostcosema* it is further distinguished by having M^1 of hindwing separate.

Type of the genus : *Opisthotia tumidilinea* (Moore) = *Geometra tumidilinea*, Moore (1894).

Geographical distribution of species. — Indian.

1. *O. tumidilinea* (Moore). N. India.
Geometra tumidilinea, Moore, Lep. Coll. Atkinson, p. 249 (1888).
Opisthotia tumidilinea, Warren, Novit. Zool. Vol. 1, p. 386 (1894).
Elliocnemis tumidilinea, Hampson, Fauna Ind. Moths, Vol. 3, p. 489 (1895).

59. Genus OSTEOSEMA, Warren

Osteosema. Warren, Novit. Zool. Vol. 1, p. 392 (1894).
Chlorostrota. Warren, ibidem. Vol. 4, p. 36 (1897).

Characters. — Face scarcely protuberant, smooth-scaled. Palpus rather slender, short to moderate, second joint shortly rough-scaled, third joint small in both sexes, or moderately long in ♀. Tongue developed. Antenna rather short, in both sexes bipectinate with simple apex, the branches shorter in the ♀ than in the ♂ (Pl. 5). Pectus and femora hairy. Hindtibia in ♂ not dilated, in both sexes with all spurs developed. Abdomen not crested. Frenulum fully developed. Forewing with costa arched, apex moderate or rather pronounced, termen oblique, very faintly waved, sometimes slightly bent at R^3, tornus rather pronounced, cell less than one-half, DC incurved, SC^1 free, SC^2 normal, R^1 separate (in *pastor* occasionally short-stalked), M^1 approximated to R^3; hindwing with apex rounded, termen convex, somewhat waved, often elbowed at R^3, tornus pronounced, sometimes (especially in *pastor*) with an approach to the expansion of *Opisthotia*, cell short, DC not very oblique, C approximated to SC for some distance near base, then rapidly diverging, SC^2 stalked, M^1 stalked.

Early stages unknown.

Type of the genus : *Osteosema sanguilineata* (Moore) = *Comibaena sanguilineata*, Moore (1894).

Geographical distribution of species. — N. India, Borneo.

Section I. — ♂ antennal pectinations short and reaching to little beyond two-thirds; ♀ palpus with third joint quite short (*Osteosema*, Warren).

1. *O. sanguilineata* (Moore). N. India.
Comibaena sanguilineata, Moore, Proc. Zool. Soc. Lond. p. 638 (1867).
Osteosema sanguilineata, Warren, Novit. Zool. Vol. 1, p. 392 (1894).
Eucrostes sanguilineata, Swinhoe, Trans. Ent. Soc. Lond. p. 176 (1894).
Thalassodes sanguilineata, Hampson, Fauna Ind. Moths, Vol. 3, p. 512 (1895).
2. *O. pastor* (Butler). N. India.
Chlorodes pastor, Butler, Ann. Mag. Nat. Hist. (5), Vol. 6, p. 210 (1880); Ill. Het. Coll. Brit. Mus. Vol. 6, p. 73, t. 117, f. 13 (1886).
Thalassodes pastor, Hampson, Fauna Ind. Moths, Vol. 3, p. 511 (1895).

Section II. — ♂ antennal pectinations rather long, and reaching to near apex; ♀ palpus with third joint relatively long (*Chlorostrota*, Warren).

3. *O. alboviridis* (Moore). N. E. Bengal.
Geometra alboviridis, Moore, Proc. Zool. Soc. Lond. p. 581, t. 34, f. 3 (1872).
Elliocnemis alboviridis, Hampson, Fauna Ind. Moths, Vol. 3, p. 489 (1895).
Chlorostrota alboviridis, Warren, Novit. Zool. Vol. 4, p. 36 (1897).
4. *O. fraeampla* (Warren) (prae. var. ?). Assam.
Chlorostrota fraeampla, Warren, Novit. Zool. Vol. 4, p. 37 (1897).

Uliocnemis albiviridis part., Hampson, Journ. Bombay Nat. Hist. Soc. Vol. 14, p. 655 (1903).

5. *O. discata* (Warren) (huj. gen.?) [1]. N. Borneo.

Chlorosterta discata, Warren, Novit. Zool. Vol. 4, p. 380 (1897).

60. Genus OCHROGNESIA, Warren

Ochrognesia. Warren, Novit. Zool. Vol. 1, p. 391 (1894).

Myrtea. Gumppenberg, Nova Acta Acad. Leop.-d. Naturf. Halle, Vol. 64, p. 478 (1895) (nec Turton, 1822).

Characters. — Face smooth. Palpus moderate, second joint relatively long, strongly rough-haired above and beneath, third joint in both sexes small. Tongue present. Antenna rather short, in ♂ bipectinate to about two thirds with rather short, well-ciliated branches, apex ciliated, in ♀ minutely ciliated. Pectus hairy. Legs short. Femora hairy. Hindtibia in ♂ much dilated, with strong hair-pencil and long terminal process. Abdomen not crested. Frenulum developed in both sexes. Forewing with costa slightly arched, apex moderate, termen curved, oblique, cell less than one-half, DC deeply incurved, oblique posteriorly, SC^1 free, SC^2 normal, R^1 very short-stalked, M^1 separate; hindwing with apex moderate, termen elbowed at R^3, tornus squared, cell short, DC not very oblique, C approximated to cell for some distance, then rapidly diverging, SC^2 stalked, R^2 from much above middle, M^1 stalked.

Early stages apparently undescribed. We suspect that the larva found at Shanghai on *Salix pentandra*, closely resembling « the remains of a leaf of which the softer parts had been eaten away » belonged to this species (See *Proc. Ent. Soc. Lond.* (3), Vol. 5, p. 20.).

Closely akin to *Comibaena*, with which it is often united; but the development of the ♀ frenulum and lack of definite basal expansion to hindwing show it to be a slightly more primitive form. From *Osteosema* it differs in the stronger, more hairy palpus, the ♂ hindtibia and the ♀ antenna.

Type of the genus : *Ochrognesia difficta* (Walker) = *Comibaena difficta*, Walker (1894).

Geographical distribution of species. — E. Asia.

1. *O. difficta* (Walker). E. Siberia to China, Japan.

Comibaena difficta, Walker, List Lep. Ins. Brit. Mus. Vol. 22, p. 576 (1861).
Phorodesma gratiosaria, Bremer, Mém. Acad. St-Pétersb. Vol. 8, p. 77, t. 7, f. 1 (1864).
Ochrognesia difficta, Warren, Novit. Zool. Vol. 1, p. 391 (1894).
Myrtea gratiosaria, Gumppenberg, Nova Acta Acad. Leop. d. Naturf. Halle, Vol. 64, p. 479 (1895).
Euchloris difficta, Leech, Ann. Mag. Nat. Hist. (6), Vol. 20, p. 230 (1897).
Euchloris gratiosaria, Staudinger Cat. ed. 3, p. 202 (1901).

Group V

61. Genus ULIOCNEMIS, Warren

Uliocnemis. Warren, Proc. Zool. Soc. Lond. p. 355 (1893).

Characters. — Face smooth or somewhat rough-scaled. Palpus in both sexes with second joint long, rough-haired beneath, third joint in ♂ rather short, in ♀ long, smooth-scaled. Tongue

1) We have only seen the one specimen, and this, though absolutely an *Osteosema* in facies and in most characters, is erratic in venation, forewing having SC^1 anastomosing strongly with C, SC^2 arising much before SC^2, M^1 widely separate from R^3, hindwing with R^2 from very near R^1.

present. Antenna rather short, with a slight or strong tuft of scales at base, in both sexes bipectinate, in ♂ with very long, in ♀ with moderate branches, apical extremity (about one-fifth) nearly simple. Pectus and femora hairy. Foretibia strongly tufted, mid- and hindtibia more or less hairy. Hindtibia not dilated, median spurs absent, or short, rather approximated to the terminal. Metathorax and abdomen crested. Hindwing with very slight costal expansion at base, frenulum in ♂ rather strong, in ♀ wanting, or vestigial. Forewing with costa gently arched, apex squared, termen entire, more or less oblique, curved, cell less than one-half, DC^3 incurved, SC^1 free, SC^2 normal, R^1 separate, connate or stalked, M^1 separate; hindwing with apex rounded or moderate, termen rounded (very slightly bulged in middle) or sinuous and elbowed at R^3, inner margin rather long, cell short, DC^3 incurved or rather oblique, C shortly approximated to cell, then rapidly diverging, SC^2 stalked (in *partita* oftener connate), M^1 stalked or connate. ♂ genitalia with uncus bifid, gnathos terminating in a point, harpes parallel, plain, with socii, vinculum square, emarginate at the base, penis pestillate, narrowed towards the base.

Larva. — Rather stout, the segments provided with haired fleshy processes, to which it attaches small pieces of withered leaves and flowers, after the manner of *Comibaena* and *Euchloris*. Colour uniform yellowish drab (Hampson, *Ill. Het. Coll. Brit. Mus.* Vol. 9, p. 145, t. 176, f. 18; Green, *Spolia Zeylanica*, Vol. 1, p. 74).

An interesting genus, standing nearly on the border-line between Groups IV and V. Turner, indeed, places it in the former, but states that he has not examined the ♀; moreover he has no doubt worked chiefly from *partita*, Walker, which is clearly the most ancestral of the genus, with the strongest ♂ frenulum, strongest crests and most primitive venation. But in spite of some variations in structure, not only in the respects just mentioned, but in the tibial armature, the genus is too natural to bear dividing. It is interesting that the genitalia show an even closer resemblance to *Euchloris* than to *Comibaena*, to which the superficial resemblance is so much greater; but all three, together with *Aglossochloris*, *Argyrocosma* and *Iulops*, form a thoroughly natural group.

Type of the genus : *Uliocnemis cassidara* (Guenée) = *Phorodesma cassidara*, Guenée (1893).

Geographical distribution of species. — Indo-Australian.

Section I. — Hindtibial armature variable 1).

1. *U. cassidara* (Guenée).

a. *Uliocnemis cassidara cassidara*. — N. India and China to Singapore.
Phorodesma cassidara, Guenée, Spec. Gén. Lép. Vol. 9, p. 370 (1858).
Comibaena cassidaria, Walker, List Lep. Ins. Brit. Mus. Vol. 22, p. 522 (1861).
Uliocnemis cassidara, Warren, Proc. Zool. Soc. Lond. p. 355 (1893).

b. *Uliocnemis cassidara biplagiata*. — Ceylon.
Comibaena biplagiata (Walker, MS.), Moore, Lep. Ceyl. Vol. 3, p. 435 (1887).

Section II. — Hinditibia with terminal spurs only.

2. *U. partita* (Walker). — **Pl. 3, Fig. 3.** — India to Australia.
Comibaena partita, Walker, List Lep. Ins. Brit. Mus. Vol. 22, p. 573 (1861).
Comibaena felicitata, Walker, ibidem, p. 579 (1861).
Thalera concisiplaga, Walker, ibidem, p. 598 (1861).
Iodis partita, Meyrick, Proc. Linn. Soc. N.S. Wales (2), Vol. 2, p. 892 (1888).
Eucrostis partita, Meyrick, Trans. Ent. Soc. Lond. p. 490 (1889).
Uliocnemis partita, Hampson, Fauna Ind. Moths, Vol. 3, p. 488, f. 210 (1895).

1) The race from N. India, China and the Malay Peninsula, so far as we have seen, has always terminal spurs only; that from Ceylon has one median spur present in the ♀ (perhaps sometimes both), and both present in the ♂.

3. *U. calliptera* (Meyrick). — British New Guinea.
Eucrostis calliptera, Meyrick, Trans. Ent. Soc. Lond. p. 489 (1889).
Uliocnemis calliptera, Warren, Novit. Zool. Vol. 6, p. 28 (1899).

4. *U. woodfordi*, Warren. — Solomon Islands.
Uliocnemis woodfordi, Warren, Novit. Zool. Vol. 6, p. 29 (1899).

SECTION III. — Hindtibia with all spurs.

5. *U. elegans*, Warren. — Dutch New Guinea, Louisiades, Bismarck Archipelago, ? N. E. Australia.
Uliocnemis elegans, Warren, Novit. Zool. Vol. 6, p. 28 (1899).
Uliocnemis cassidara, Pagenstecher, Zoologica, Vol. 29, p. 153 (1900) (nec Guenée).

62. GENUS AGATHIOPSIS, WARREN

Agathiopsis, Warren, Novit. Zool. Vol. 3, p. 285 (1896).

Characters. — Face smooth. Palpus moderate, second joint with close, thick scaling, third joint smooth, in ♂ short, in ♀ moderate. Tongue developed. Antenna moderate, in ♂ bipectinate to beyond one-half, with moderate or rather short branches, in ♀ nearly simple. Pectus and femora hairy. Hindtibia in ♂ dilated, with hair-pencil and moderate terminal process, in both sexes with all spurs. Metathorax crested (especially in *basipuncta*). Abdomen not appreciably crested. Wings moderately or rather thinly scaled. Frenulum in ♂ well developed, in ♀ wanting or vestigial. Forewing with costa straight to near apex, then arched, apex moderate or rather acute, termen gently or strongly curved, oblique, entire or faintly waved, cell nearly one-half, DC incurved, SC^1 free, SC^2 stalked to beyond SC^5, R^1 connate or short-stalked, M^1 connate or separate; hindwing with apex rounded, termen crenulate, in *maculata* with a more prominent tail at R^5, tornus pronounced, cell short, DC^2 sometimes rather strongly oblique, DC^3 rather straight or incurved, not very oblique, C shortly appressed to cell near base (the appression in *maculata* sometimes commencing with point-anastomosis), rapidly diverging, SC^2 stalked, R^2 very characteristic, M^1 stalked. ♂ genitalia with uncus large, massive, tapered, gnathos very strong, terminating in a strong tooth; below and behind the uncus, on either side, protrude scobinated globular processes; harpes fused at the base, the clasper exactly resembling a stockinged leg and foot; penis pestillate, widening above; coremata present.

Early stages unknown.

Is in similar case, as regards the frenulum, to the preceding genus; the basal expansion in the ♂ is entirely negligeable, and the frenulum of full development, yet it is completely atrophied in the ♀. The type species differs from the other two in a large number of slight structural details, each species being very true to its own characters; but there can be no doubt as to their relationship. There is a marked sexual dimorphism in all, though not so extreme as in typical *Anisozyga*.

Type of the genus : *Agathiopsis maculata*, Warren (1896).

Geographical distribution of species. — New Guinea and N. Queensland to Solomons.

1. *A. maculata*, Warren. — New Guinea, Fergusson Isl., New Pomerania.
Agathiopsis maculata, Warren, Novit. Zool. Vol. 3, p. 286 (1896).
Agathia benedicta, Pagenstecher, Zoologica, Vol. 29, p. 152, t. 2, f. 39 (1900) (nov. syn.).

2. *A. basipuncta*, Warren. — Pl. 3, Fig. 4. — New Guinea, Fergusson Isl., N. Queensland.
Agathiopsis basipuncta, Warren, Novit. Zool. Vol. 3, p. 285 (1896).
Euchloris amphibola, Turner, Trans. Roy. Soc. S. Austral. Vol. 30, p. 128 (1906).

3. *A. subflavata*, Warren. — Solomon Islands.
Agathiopsis subflavata, Warren, Novit. Zool. Vol. 12, p. 421 (1905).

63. Genus CHLOROMIANTA, Warren

Chloromianta. Warren, Novit. Zool. Vol. 3, p. 104 (1896).

Characters. — Face smooth. Palpus in ♂ moderate, second joint shortly but densely scaled, third joint rather small (♀ unknown). Tongue present. Antenna in ♂ bipectinate to two-thirds with moderate branches. Pectus hairy. Hindtibia in ♂ somewhat dilated, all spurs present, the terminal the shorter. Abdomen with four dorsal crests of curved hairs. Frenulum in ♂ developed, no appreciable basal expansion to hindwing. Forewing with costa straight to near apex, then arched, apex moderate, termen oblique, especially posteriorly, cell less than one-half, DC incurved, SC^1 free, SC^2 stalked to beyond SC^5, R^1 connate, M^1 approximated; hindwing with apex rounded, termen subcrenulate, slightly toothed at R^1 and R^3, tornus pronounced, cell short, DC^2 oblique, DC^3 hardly oblique, C shortly approximated to SC near base, then rapidly diverging, SC^2 stalked, M^1 short-stalked.

Early stages unknown.

Apparently close to the preceding and following genera, so that the ♀ frenulum may be assumed to be wanting or vestigial; that of the ♂ is as in *Agathiopsis*.

Type of the genus : *Chloromianta ferruginata*, Warren (1896).

Geographical distribution of species. — Assam.

1. *C. ferruginata*, Warren. — **Pl. 3, Fig. 5.** Khasis.
Chloromianta ferruginata, Warren, Novit. Zool. Vol. 3, p. 104 (1896).
Chlorodontopera ferruginata, Hampson, Journ. Bombay Nat. Hist. Soc. Vol. 12, p. 89 (1898).

64. Genus RHOMBORISTA, Warren

Rhomborista. Warren, Novit. Zool. Vol. 4, p. 44 (1897).

Characters. — Face smooth. Palpus moderate to rather long, second joint shortly but densely scaled, third joint smooth-scaled, in ♂ short, in ♀ variable. Tongue present. Antenna short, in ♂ bipectinate to about two-thirds with rather long branches, in ♀ nearly simple. Pectus hairy. Hindtibia in ♂ dilated with hair-pencil, but without terminal process, all spurs present. Abdomen with small, narrow crests. Frenulum in ♂ rather strong, but not very long, arising from before a basal expansion of hindwing, in ♀ wanting. Forewing with costa slightly arched, apex moderate or rather acute, termen oblique, varying from very gently curved to ventricose, cell rather short, DC somewhat sinuous, usually slightly angled at origin of R^2, SC^1 free, SC^2 stalked to far beyond SC^5, R^1 connate or separate, M^1 separate; hindwing with apex rounded, termen crenulate, with projecting teeth at R^1 and R^3, or smoother with slighter teeth, tornus pronounced, cell rather short, DC^2 obliquely curved, DC^3 arising markedly distally, curved or rather strongly oblique, C approximated to cell near base, then rapidly diverging, SC^2 stalked, M^1 very shortly stalked, connate or approximated.

Early stages apparently undescribed.

A very close relative of *Chloromianta*, but with definite basal expansion of hindwing, and with very different, slighter dorsal crests.

Type of the genus : *Rhomborista devexata* (Walker) — *Comibaena devexata*, Walker (1897).

Geographical distribution of species. — India to Sunda Islands, New Guinea.

1. *R. devexata* (Walker). India.

Comibaena devexata, Walker, List Lep. Ins. Brit. Mus. Vol. 22, p. 573 (1861).
Agathia scutuligera, Butler, Ann. Mag. Nat. Hist. (5), Vol. 6, p. 216 (1880); Ill. Het. Coll. Brit. Mus. Vol. 6, p. 73, t. 118, f. 1 (1886).
Comibaena scutiligera, Cotes & Swinhoe, Cat. Moths Ind. (4), p. 523 (1888).
Oenospila scutuligera, Swinhoe, Trans. Ent. Soc. Lond. p. (1892).
Euchloris devexata, Swinhoe, ibidem, p. 175 (1894).
Chlorodontopera devexata, Hampson, Fauna Ind. Moths, Vol. 3, p. 484 (1895).
Rhomborista devexata, Warren, Novit. Zool. Vol. 4, p. 44 (1897).

2. *R. megaspilaria* (Guenée). Borneo, Java.

Phorodesma megaspilaria, Guenée, Spec. Gén. Lép. Vol. 9, p. 371 (1858).
Comibaena megaspilaria, Walker, List Lep. Ins. Brit. Mus. Vol. 22, p. 577 (1861).
Comibaena uniplaga, Walker, ibidem, p. 578 (1861).
Rhomborista megaspilaria, Warren, Novit. Zool. Vol. 4, p. 44 (1897).

3. *R. semipurpurea*, Warren. N. E. India.

Rhomborista semipurpurea, Warren, Novit. Zool. Vol. 4, p. 45 (1897).
Chlorodontopera megaspilaria (part.), Hampson, Journ. Bombay Nat. Hist. Soc. Vol. 12, p. 89 (1898).

4. *R. gibbosa*, Prout. Dutch New Guinea.

Rhomborista megaspilaria gibbosa, Prout, The Entomologist, Vol. 44, p. 27 (1911).

65. Genus SPANIOCENTRA, nov. gen., Prout

Spaniocentra, nov. gen. Prout.

Characters. — Face smooth. Palpus rather long, especially in ♀, second joint close-scaled, reaching well beyond frons, third joint smooth-scaled, in ♂ moderate, in ♀ long. Tongue present. Antenna rather short, in ♂ bipectinate to beyond one-half with moderate branches, a considerable apical portion merely with short cilia, in ♀ minutely ciliated. Pectus somewhat hairy. Hindtibia in ♂ not dilated (except in *undiferata*), in both sexes with terminal spurs only. Abdomen with small, narrow crests. Hindwing with marked basal expansion, frenulum wanting in ♀. Forewing slightly arched at base and distally, nearly straight between, apex acute, termen smooth, oblique, slightly curved (in *undiferata* very strongly oblique posteriorly), cell less than one-half, DC^2 incurved, DC^3 somewhat curved, becoming oblique, SC^1 free, SC^2 stalked to beyond SC^5, R^1 connate or stalked, M^1 separate; hindwing with termen waved, produced to a small tooth at R^1, and with a still slighter one at R^3, tornus pronounced, cell short, DC^2 obliquely curved, DC^3 arising distally, usually rather straight and not very oblique, C shortly or moderately appressed to cell, always diverging before middle, SC^2 stalked, M^1 usually short-stalked, sometimes connate or approximated (**Pl. 2, Fig. 16**). ♂ genitalia : uncus abruptly tapering, with short socii, gnathos pointed, harpe with a dentate plate on the inner side, penis pestillate, ædœagus covered with large spines, vesica with a bunch of cornuti.

Larva. — Slender, twig-like, green, spiracles black, prothorax and eighth abdominal with a pointed prominence. Feeds on *Loranthus* (Moore, *Lep. Ceyl.* Vol. 3, p. 434).

Pupa. — Green, abdominal segments minutely black-speckled (Moore, loc. cit.).

An offshoot of *Rhomborista*, distinguished chiefly by the absence of the median spurs.

Type of the genus : *Spaniocentra pannosa* (Moore) = *Comibaena pannosa*, Moore.

Geographical distribution of species. — India and China to Celebes.

1. *S. pannosa* (Moore). India to Burma, Borneo (var ?).

Comibaena pannosa, Moore, Lep. Ceyl. Vol. 3, p. 433, t. 145, f. 1, 1a (1887).

Comibaena devexata , Walker. List Lep. Ins. Brit. Mus. Vol. 22, p. 574 (1861) (nec typus).
Enospila lyra, Swinhoe. Trans. Ent. Soc. Lond. p. 6 (1892).
Chlorodontopera pannosa, Hampson, Fauna Ind. Moths. Vol. 3, p. 484 (1895).
Rhomborista pannosa, Swinhoe, Lep. Het. Oxford Mus. Vol. 2, p. 389 (1900).

2. *S. incomptaria* (Leech) (præc. var. vel syn. ?). W. China.
Euchloris incomptaria, Leech, Ann. Mag. Nat. Hist. (6), Vol. 20, p. 239 (1897).

3. *S. undiferata* (Walker). Celebes.
Comibaena undiferata, Walker. List Lep. Ins. Brit. Mus. Vol. 35, p. 1612 (1860).
Chlorodontopera devexata (part.), Hampson, Fauna Ind. Moths, Vol. 3, p. 484 (1895) (nec Walker).
Rhomborista undiferata, Warren. Novit. Zool. Vol. 4, p. 44, 391 (1897); Swinhoe, Lep. Het. Oxford Mus. Vol. 2, p. 389, t. 6, f. 1 (1900).

66. Genus METACINETA, nov. gen., Prout

Metacineta, nov. gen. Prout.

Characters. — Face smooth. Palpus in both sexes short (scarcely longer than diameter of eye), second joint with moderately appressed scales, third joint smooth, slender. Tongue present. Antenna short, in ♂ bipectinate to about three-fourths, with long branches, in ♀ almost as strongly bipectinate. Pectus somewhat hairy. Hindtibia in ♂ not dilated, in both sexes with all spurs. Abdomen with small curved crests. Frenulum present in ♂, wanting in ♀. Forewing rather broad, costa slightly arched, apex squared, termen faintly waved, curved, oblique posteriorly, cell not quite one-half, DC^2 somewhat curved, DC^3 becoming very oblique, SC^1 free, SC^2 long-stalked with SC^{3+4} (far beyond origin of SC^5), R^1 very short-stalked, M^1 separate; hindwing ample, termen convex, faintly subcrenulate, sometimes with a slightly stronger elbow at R^3, tornus pronounced, cell not quite one-half, DC^2 obliquely curved, becoming almost horizontal, DC^3 arising considerably distally, oblique, C closely approximated to or anastomosing with cell at a point near base, rapidly diverging, SC^2 short-stalked, M^1 well separate.

Early stages unknown.

Differs from *Rhomborista*, as will appear from the diagnoses, in a number of characters, though none, perhaps, very profound. Moreover, all the species of *Metacineta*, so far as at present known, are characterized by a white vermiculation on the green wings, very different from the smooth, even green of *Rhomborista*. All the species are closely related (possibly races of one variable species.)

Type of the genus : *Metacineta intermaculata* (Warren) — *Rhomborista intermaculata*, Warren.

Geographical distribution of species. — Æthiopian.

1. *M. intermaculata* (Warren). Senegambia.
Rhomborista intermaculata, Warren, Novit. Zool. Vol. 12, p. 386 (1905).

2. *M. rhodosticta* (Hampson) (præc. var. ?). Mashonaland to British E. Africa.
Comibaena rhodosticta, Hampson, Proc. Zool. Soc. Lond. p. 475, t. 30, f. 30 (1910).

3. *M. rubella* (Warren) (*intermaculata* var. ?). Niger.
Heterorachis rubella, Warren, Novit. Zool. Vol. 11, p. 465 (1904).

4. *M. aggravaria* (Guenée) (huj. gen. ?) 1). « Cayenne? ».
Racheospila aggravaria, Guenée, Spec. Gen. Lep. Vol. 9, p. 373 (1858).
Racheolopha aggravaria, Warren, Novit. Zool. Vol. 7, p. 137 (1900).

5. *M. rufomarginata* (Pagenstecher) (huj. gen. ?). Quilimane.
Thallassodes rufomarginata, Pagenstecher, Jahrb. Hamburg. Anstalten, Vol. 10 (2), p. 46 (1893).

1) Guenée's description, and a sketch of his type kindly sent to us by M. Ch. Oberthur, strongly suggest a member of this genus, in which case there can be no doubt that Guenée's queried locality was erroneous. We know no South American species at all like this.

67. Genus ARGYROCOSMA, Warren

Argyrocosma. Turner, Proc. Linn. Soc. N. S. Wales, Vol. 35, p. 609 (1910).

Characters. — Face smooth. Palpus moderate to long, second joint reaching beyond frons, moderately rough-scaled, third joint smooth, in ♂ rather short, in ♀ long, slender, slightly spatulate. Tongue developed. Antenna in ♂ bipectinate to about three-fourths, with long branches, in ♀ minutely ciliated. Pectus slightly hairy. Hindtibia in ♂ somewhat dilated, with hair-pencil and terminal process, in both sexes with all spurs. Abdomen not crested. Frenulum in ♂ present, slender, in ♀ vestigial. Forewing with costa gently arched, apex moderately acute, termen curved, oblique, cell about one-half, DC^2 curved, becoming oblique, DC^3 arising distally, SC^1 stalked with SC^{2-5}, well away from C, SC^2 arising after SC^5, R^1 well separate, M^1 well separated at origin from R^3; hindwing with apex moderate, termen rounded, tornus pronounced, cell about one-half, DC^2 curved, becoming almost horizontal, DC^3 arising considerably distally, sometimes very oblique, C rather shortly approximated to cell near base, SC^2 stalked, R^2 from a little above middle of cell, sometimes almost central 1), M^1 widely separated at origin from R^3 (Pl. 2, Fig. 12).

Larva. Undescribed. A drawing by F. Moore, in coll. Brit. Mus., made from a Javan specimen of that of *phrixopa*, shows a rugose brown larva, unmistakably akin of that of *Comibaena*, clothed with large pieces of leaf.

Pupa. — Of moderate build, tapering somewhat towards head; brown, surface finely shagreened, spiracular spots raised, dark; anal extremity as in the allies, a strong projection above the anus bearing the armature of spines, which is nearly as that of *Hipparchus*, the strong central pair curved and crossed, the others (probably six, but one or two broken off) more slender, ending in spiral curves (from empty pupa-case of *phrixopa* in coll. Brit. Mus.).

The genus is certainly related to the following (especially to *subhyalina*), but very distinct in its more extreme venation, palpus less rough-scaled above.

Type of the genus : *Argyrocosma argosticta*, Turner (1910).

Geographical distribution of species. — Java to N. Australia.

1. *A. argosticta*, Turner. — N. Australia.
   Euchloris argosticta, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 28, p. 220 (1904).
   Argyrocosma argosticta, Turner, ibidem, Vol. 35, p. 610 (1910).
2. *A. phrixopa* (Meyrick). — Java to Sumba.
   Thalassodes phrixopa, Meyrick, Trans. Ent. Soc. Lond. p. 73 (1897).
   Prasinocyma albipunctata, Warren, Novit. Zool. Vol. 4, p. 360 (1897) nov. syn.

68. Genus COMIBÆNA, Hübner

Comibæna. Hübner, Verz. bek. Schmett. p. 284 (1826?); Walker, List Lep. Ins. Brit. Mus. Vol. 22, p. 568 (1861)

1) The obvious explanation of this is that on account of the distad migration of DC^3 a portion of vein which would have been reckoned to R^3 has to be regarded as belonging to DC^3; we have a specimen in which DC^3 is more than usually oblique, its base more proximad and the point of origin of R^3 consequently more normal.

Phorodesma, Boisduval, Gen. et Ind. Meth. Eur. Lep. p. 179 (1840); Guenée, Spec. Gén. Lep. Vol. 9, p. 368 (1858).

Colutoceras, Warren, Novit. Zool. Vol. 2, p. 88 (1895).

Chlorochromodes, Warren, ibidem, Vol. 3, p. 103 (1896).

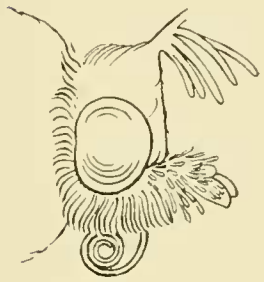
Comostolodes, Warren, ibidem, p. 308 (1896).

Probolosceles, Warren, ibidem, p. 368 (1897); Meyrick, Trans. Ent. Soc. Lond. p. 73 (1897).

Proboloscles, Sharp, Zool. Rec. Vol. 33, p. 260 (1897).

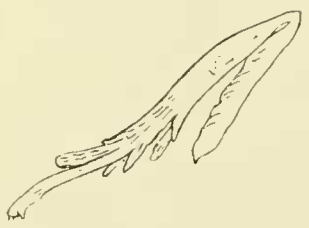
Characters. — Face smooth. Palpus with second joint long, strong, subascending, clothed with long hair-scales beneath and rough-scaled above, third joint porrect or slightly deflexed, smooth-scaled, rather slender, in ♂ short to moderate, in ♀ moderate to long (Fig. 9). Tongue present. Antenna rather short to moderate, in ♂ bipectinate to about two-thirds, with long branches, in ♀ nearly simple, minutely ciliated, or dentate-ciliate, or very rarely (*argentataria*, *biviaria*) bipectinate, though more shortly than in the ♂. Pectus hairy. Femora somewhat hairy. Foretibia sometimes strongly tufted, as in *Ulioc-nemis*. Hindtibia in ♂ (except *apicipicta*) dilated with hair-pencil and more or less long terminal process (Fig. 10). Abdomen not crested. Frenulum in ♂ rather short, from before well-marked basal expansion, in ♀ vestigial, often entirely wanting. Forewing with costa gently arched, apex squared or somewhat acute, termen entire, oblique, rather straight or gently curved, cell less than or fully one-half, DC incurved (usually continuously, very rarely with DC^2 separately curved, resulting in a form approaching that of the preceding genera), SC^1 usually from near end of cell or connate or very shortly stalked, occasionally (*procumbaria*, *inductaria*, *biplaga*, *quadrinotata*, *integranota*, *attenuata* and perhaps a few others) well stalked, oftenest free, sometimes anastomosing with C, SC^2 usually arising before SC^5 (after it in *biplaga*, *quadrinotata*, *integranota*, *attenuata*, variable in *procumbaria*), R^1 usually stalked with SC^{2-5}, sometimes connate or separate, M^1 usually separate, sometimes connate or stalked: hindwing with apex moderate (pronounced in *tenera*), termen smooth or faintly waved, usually well rounded, sometimes straighter, tornus distinct (in *pictipennis* and its nearest allies slightly produced), cell less than or fully one-half, DC somewhat curved, typically becoming strongly oblique (DC^2 sometimes separately curved, in *subhyalina* indeed almost angled), C shortly approximated to cell near base, rapidly diverging, SC^2 stalked, R^2 variable in position, typically from much above middle, M^1 very variable, typically connate, approximated or very shortly stalked, sometimes (*inductaria*, *mariae*, *albicatena*, and probably a few others) longer stalked, occasionally (*subhyalina*, *tenera*) widely separate at origin. ♂ genitalia with uncus bifid, with pointed socii, gnathos with arms not united (absent in *pustulata*), harpe sometimes dentate on inner margin, vinculum square (in *inductaria* rounded), strongly emarginate at the base, penis long and slender (*pustulata*, *inductaria*, *mariae* and *integranota* genitalia examined).

Fig. 9



Head of *Comibaena pustulata*, Hufnagel, ♂.

Fig. 10



Hindleg of *Comibaena mariae*, Lucas, ♂.

Egg. — Very flat, a short rounded oval with micropylar end truncate, both sides deeply depressed, surface covered with a delicate, but very much raised, cell net-work (Bacot, *Ent. Rec.* Vol. 15, p. 204).

Larva. — Exceedingly rugose, the skin shagreened or spicular, in first stadium an enormously developed lateral flange, specially developed processes on this flange (subdorsal on abdominal

segments 1-4, subventral on 5, dorsal on 8) each bearing a specialized hooked hair (in later life modified into tall fleshy cone armed with hooks), some flask-shaped, hollow hairs on the thoracic segments and abdominals 1-8 (lost in later life); by means of silken threads twined about the hooks, the larva attaches fragments of the foodplant, by which the body is almost entirely concealed (Burrows & Bacot, loc. cit. p. 175, 204, t. 8, on *pustulata*; the larvæ of several other species are known, and have the same habit).

Pupa. — Brown, rugose, shagreened, dull, the dorsal area of posterior abdominal segments bearing numerous flattened spines, pointing backwards, spiracles large and dark, scars of the special larval processes present, bearing short but stout curved hairs; anal armature consisting of four large, strong, scythe-shaped, spirally curved hooks (Bacot, loc. cit. p. 205).

An evidently natural genus, nearly akin to *Uliocnemis*, though more specialized in the basal expansion of hindwing, loss of crests, etc.; the ♂ is almost always further distinguishable by the hindtibial process, the ♀ almost always by non-pectinate antenna. Only in the venation is there any great variation, and this (as Dr. Turner very shrewdly surmised with extremely restricted material) cannot be utilized for generic subdivision, nor even, we find, for subgeneric. In a few species (noted above) SC^2 of forewing arises constantly beyond SC^5 (*Probolosceles*, Warren), but in *procumbaria*, and not improbably in *biplaga*, it arises either before or beyond. In *inductaria* SC^1 of forewing is constantly longish-stalked with the other subcostals, but in its evidently close ally *albicatena* (the *type* of *Comostolodes*, Warren) it is about connate, in *subhyalina* from the cell. Examples could be multiplied. The examined genitalia (especially *pustulata* and *inductaria*) show close relationship.

Type of the genus : *Comibaena pustulata* (Hufnagel) = *Phalaena pustulata*, Hufnagel = *Comibaena bajularia*, Walker (1861).

Geographical distribution of species. — Eastern Palæarctic and Indo-Malayan, straggling into Europe, Africa and Australia.

1. *C. pustulata* (Hufnagel). — Central and S. Europe, Asia Minor.

Phalaena pustulata, Hufnagel, Berl. Mag. Vol. 4, p. 520 (1767) [1].
Phalaena Geometra bajularia [Schiffermuller], Schmett. Wien, p. 97 (1775).
Phalaena ditaria, Fabricius, Gen. Ins. p. 280 (1777).
Phalaena glauca, Geoffroy, Fourcroy's Ent. Paris, p. 267 (1785).
Geometra bajularia, Hubner, Samml. Eur. Schmett. Geom. t. 1, f. 3 (1796?); p. 15 (1800?).
Comibaena bajularia, Hübner, Verz. bek. Schmett. p. 284 (1826?).
Cleora bajularia, Stephens, Cat. Brit. Ins. (2), p. 123 (1829).
Hipparchus bajularia, Curtis, Brit. Ent. Vol. 7, p. 300 (1830).
Phorodesma bajularia, Boisduval, Gen. et Ind. Meth. Eur. Lep. p. 170 (1840).
Phorodesma pustulata, Lederer, Verh. Zool.-bot. Ges. Wien, Vol. 3, p. 172 (1853).
Euchloris pustulata, Meyrick, Trans. Ent. Soc. Lond. p. 95 (1892).
Myrtea pustulata, Gumppenberg, Nova Acta Acad. Leop. d. Naturf. Halle, Vol. 64, p. 479 (1895).
Comibaena pustulata, Prout, Trans. City Lond. Ent. Soc. Vol. 10, p. 64 (1901).

2. *C. neriaria* (Herrich-Schäffer). — Greece to Armenia.

Geometra neriaria, Herrich-Schaffer, Syst. Bearb. Schmett. Eur. Vol. 3, t. 70, f. 429 (1848); Vol. 6, p. 62 (1852).
Phorodesma neriaria, Lederer, Verh. Zool.-bot. Ges. Wien, Vol. 3, p. 172 (1853).
Comibaena neriaria, Walker, List Lep. Ins. Brit. Mus. Vol. 22, p. 560 (1861).
Euchloris neriaria, Meyrick, Trans. Ent. Soc. Lond. p. 95 (1892).
Myrtea neriaria, Gumppenberg, Nova Acta Acad. Leop. d. Naturf. Halle, Vol. 64, p. 479 (1895).

3. *C. inductaria* (Guenée). — India to N. Queensland.

Phorodesma inductaria, Guenée, Spec. Gén. Lép. Vol. 9, p. 370 (1858).

[1] This name scarcely need be considered invalidated by *Phalaena* (*Noctua*) *pustulata*, Muller (1764).

Eucrostis smaragdus, Hampson, Ill. Het. Coll. Brit. Mus. Vol. 8, p. 110, t. 151, f. 15 (1891).
Nemoria smaragdus, Hampson, Fauna Ind. Moths, Vol. 3, p. 504 (1895).
Comostolodes inductaria, Warren, Novit. Zool. Vol. 3, p. 309 (1896).
Comostolodes smaragdus, Warren, ibidem, p. 309 (1896).
Comostolodes consobrina, Warren, ibidem. Vol. 4, p. 210 (1897).

4. *C. detenta* (Walker). — N. India, ? Philippines.
Geometra detenta, Walker, List Lep. Ins. Brit. Mus. Vol. 22, p. 518 (1861).
Geometra dissessa, Walker, ibidem, p. 521 (1861).
Geometra dentata, Moore, Proc. Zool. Soc. Lond. p. 636 (1867).
Nemoria detenta, Hampson, Fauna Ind. Moths, Vol. 3, p. 503 (1895).
Probolosceles detenta, Warren, Novit. Zool. Vol. 3, p. 368 (1897).
Probolosceles dissessa, Warren, ibidem, p. 368 (1897).

5. *C. biplaga*, Walker. — Borneo.
Comibaena biplaga, Walker, List Lep. Ins. Brit. Mus. Vol. 22, p. 577 (1861).
Probolosceles biplaga, Warren, Novit. Zool. Vol. 3, p. 368 (1896).

6. *C. leucospilata* (Walker). — Cape to British E. Africa.
Geometra leucospilata, Walker, List Lep. Ins. Brit. Mus. Vol. 26, p. 1554 (1862).
Racheospila coryphata, Felder, Reise Novara, Lep. Het. t. 127, f. 10 (1875) (nov. syn.).
Probolosceles leucospilata, Swinhoe, Trans. Ent. Soc. Lond. p. 550 (1904).

7. *C. chalybeata*, Moore. — N. India.
Comibaena chalybeata, Moore, Proc. Zool. Soc. Lond. p. 639 (1867).
Geometra chalybeata, Hampson, Fauna Ind. Moths, Vol. 3, p. 496 (1896).
Uliocnemis chalybeata, Warren, Novit. Zool. Vol. 6, p. 29 (1899).

8. *C. procumbaria* (Pryer). — China to Japan.
Euchloris procumbaria, Pryer, Cist. Ent. Vol. 2, p. 232, t. 4, f. 2 (1877).
Comibaena vaga, Butler, Trans. Ent. Soc. Lond. p. 410 (1881).

9. *C. pictipennis*, Butler. — N. India.
Comibaena pictipennis, Butler, Ann. Mag. Nat. Hist. (5), Vol. 6, p. 215 (1880); Ill. Het. Coll. Brit. Mus. Vol. 6, p. 72, t. 117, f. 12 (1886).
Geometra pictipennis, Hampson, Fauna Ind. Moths, Vol. 3, p. 496 (1895).

10. *C. amoenaria* (Oberthür). — Amur to Corea.
Phorodesma amoenaria, Oberthur, Étud. Ent. Fasc. 5, p. 48, t. 9, f. 4 (1880).
Uliocnemis amoenaria, Warren, Novit. Zool. Vol. 4, p. 392 (1897).
Euchloris amoenaria, Staudinger, Cat. ed. 3, p. 262 (1901).

11. *C. leucochloraria* (Mabille). — Madagascar.
Phorodesma leucochloraria, Mabille, C. R. Soc. Ent. Belg. Vol. 23, p. 22 (1880).

12. *C. cheramota* (Meyrick). — Fiji.
Iodis cheramota, Meyrick, Trans. Ent. Soc. Lond. p. 203 (1886).
Iodis chersometa, Druce, Proc. Zool. Soc. Lond. p. 227 (1888).
Iodis checometa, Druce, ibidem, p. 577 (1888).

13. *C. mariae* (Lucas). — Queensland, New Guinea.
Iodis mariae, Lucas, Proc. Linn. Soc. N. S. Wales (2), Vol. 3, p. 1260 (1888).
Probolosceles albipunctata, Warren, Novit. Zool. Vol. 5, p. 15 (1898).
Probolosceles connata, Warren, ibidem, p. 15 (1898).
Probolosceles mariae, Swinhoe, Trans. Ent. Soc. Lond. p. 672 (1902).
Comibaena mariae, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 35, p. 591 (1910).

14. *C. tenuisaria* (Graeser). — E. Siberia.
Phorodesma tenuisaria, Graeser, Berl. Ent. Zeitschr. Vol. 32, p. 385 (1889); Staudinger, Iris, Vol. 10, p. 7, t. 1, f. 1 (1897).
Euchloris tenuisaria, Staudinger, Cat. (ed. 3), p. 262 (1901).

15. *C. quadrinotata*, Butler. — N. India.
Comibaena quadrinotata, Butler, Ill. Het. Coll. Brit. Mus. Vol. 7, p. 107, t. 136, f. 7 (1889).
Nemoria quadrinotata, Hampson, Fauna Ind. Moths, Vol. 3, p. 503 (1895).

16. *C. tancrei* (Graeser). — Amur.
Phorodesma tancrei, Graeser, Berl. Ent. Zeitschr. Vol. 33, p. 264 (1890); Staudinger, Iris, Vol. 10, p. 8, t. 1, f. 2 (1897).
Euchloris tancrei, Staudinger, Cat. (ed. 3), p. 262 (1901).

17. *C. integranota*, Hampson. — Ceylon, Nilgiris.
Comibaena integranota, Hampson, Ill. Het. Coll. Brit. Mus. Vol. 9, p. 146, t. 170, f. 13 (1893).
Eucrostes integranota, Swinhoe, Trans. Ent. Soc. Lond. p. 177 (1894).
Nemoria integranota, Hampson, Fauna Ind. Moths, Vol. 3, p. 504 (1895).
Probolosceles integranota, Warren, Novit. Zool. Vol. 3, p. 368 (1896).

18. *C. albimarginata* (Warren). — N. India.
Ulioenemis albimarginata, Proc. Zool. Soc. Lond. p. 355 (1893).

19. *C. delineata* (Warren). — N. India to Tibet.
Ulioenemis delineata, Warren, Proc. Zool. Soc. Lond. p. 356, t. 31, f. 14 (1893).
Geometra delineata, Hampson, Fauna Ind. Moths, Vol. 3, p. 407 (1895).

20. *C. diluta* (Warren). — Japan.
Colutoceras diluta, Warren, Novit. Zool. Vol. 2, p. 88 (1895).

21. *C. tenera* (Warren). — Assam.
Chlorochromodes tenera, Warren, Novit. Zool. Vol. 3, p. 103 (1896).
Euchloris tenera, Hampson, Journ. Bombay Nat. Hist. Soc. Vol. 12, p. 90 (1898).

22. *C. albicatena* (Warren). — Pl. 3, Fig. 8. — Assam.
Comostolodes albicatena, Warren, Novit. Zool. Vol. 3, p. 309 (1896).
Euchloris dispansa (part.), Hampson, Journ. Bombay Nat. Hist. Soc. Vol. 12, p. 90 (1898) (nec Walker).

23. *C. attenuata* (Warren). — Borneo to Burma.
Probolosceles attenuata, Warren, Novit. Zool. Vol. 3, p. 369 (1896).
? *Comibaena biplaga* var., Walker, List Lep. Ins. Brit. Mus. Vol. 22, p. 557 (1861) (nec typus).
Nemoria integranota (part.), Hampson, Fauna Ind. Moths, Vol. 3, p. 504 (1895) (nec typus).

24. *C. pallidicincta* (Warren). — W. Java, ? Talaut.
Probolosceles pallidicincta, Warren, Novit. Zool. Vol. 4, p. 213 (1897).
? *Probolosceles quadrinotata*, Meyrick, Trans. Ent. Soc. Lond. p. 73 (1907) (nec Butler).

25. *C. argentataria* (Leech). — China, Japan, Corea.
Euchloris argentataria, Leech, Ann. Mag. Nat. Hist. (6), Vol. 20, p. 237 (1897).

26. *C. nigromacularia* (Leech). — China, S. E. Siberia, Japan.
Ulioenemis albimarginata (part.), Hampson, Fauna Ind. Moths, Vol. 3, p. 489 (1895) (nec Warren).
Euchloris nigromacularia, Leech, Ann. Mag. Nat. Hist. (6), Vol. 20, p. 237 (1897).
Ulioenemis delicatior, Warren, Novit. Zool. Vol. 4, p. 391 (1897) nov. syn.

27. *C. ornataria* (Leech). — W. China.
Euchloris ornataria, Leech, Ann. Mag. Nat. Hist. (6), Vol. 20, p. 238 (1897).

28. *C. obsoletaria* (Leech). — Japan.
Euchloris obsoletaria, Leech, Ann. Mag. Nat. Hist. (6), Vol. 20, p. 238 (1897).

29. *C. striataria* (Leech). — W. China.
Euchloris striataria, Leech, Ann. Mag. Nat. Hist. (6), Vol. 20, p. 239 (1897).

30. *C. pulchra* (Staudinger). — Palestine.
Phorodesma pulchra, Staudinger, Iris, Vol. 10, p. 302, t. 4, f. 27 (1897).
Euchloris pulchra, Staudinger, Cat. (ed. 3), p. 262 (1901).

31. *C. flavitaenia* (Warren). — Nigeria.
Enospila flavitaenia, Warren, Novit. Zool. Vol. 5, p. 13 (1898).

32. *C. esmeralda* (Warren). — Nigeria.
Probolosceles (?) *esmeralda*, Warren, Novit. Zool. Vol. 5, p. 15 (1898).

33. *C. subhyalina* (Warren). — N. India.
Comibaena inductaria, Butler, Ill. Het. Coll. Brit. Mus. Vol. 7, p. 22 (1889) nec Guenée).
Euchloris inductaria, Hampson, Fauna Ind. Moths, Vol. 3, p. 499 (1895).
Comostolodes subhyalina, Warren, Novit. Zool. Vol. 6, p. 22 (1899).

34. *C. punctaria* (Swinhoe). — Madagascar.
Probolosceles punctaria, Swinhoe, Trans. Ent. Soc. Lond. p. 550 (1904).

35. *C. viridifimbria* (Warren). — British New Guinea.
Comostolodes viridifimbria, Warren, Novit. Zool. Vol. 13, p. 87 (1906).

36. *C. biviaria*. Hampson. Ruwenzori.
Comibaena biviaria, Hampson, Trans. Zool. Soc. Lond. Vol. 19 (2), p. 126, t. 4, f. 60 (1909).

37. **C. latilinea, nov. sp.** 1), Prout. W. China.
Euchloris chlorophyllaria, Leech, Ann. Mag. Nat. Hist. (6), Vol. 20, p. 230 (1897) (nec Hedemann).

38. **C. apicipicta, nov. sp.** 2), Prout. Tibet.

39. **C. fuscidorsata, nov. sp.** 3), Prout. Assam, ? Ceylon.

Note. — *Comibaena reflexaria*, Walker, *List Lep. Ins. Brit. Mus.* Vol. 20, p. 1565, *C. perlepidata*, Walker, ibidem, and *C. scriptifasciata*, Walker, ibidem, p. 1567, do not belong to this subfamily, but to the genus *Zamarada*. *C. gavisata*, Walker is a *Plutodes*, as shown by Hampson. *C. hyalinata*, Moore, *Proc. Zool. Soc. Lond.* 1867, p. 638, and *C. fenestraria*, Moore, ibidem, p. 639, are not even Geometrid, but Drepanid. *Phorodesma cogenaria*, Snellen, *Tydschr. v. Ent.* Vol. 24, p. 78, is another *Zamarada*.

69. Genus CHLOROCHÆTA, Warren

Chlorochæta. Warren, Novit. Zool. Vol. 11, p. 464 (1904).

Characters. — Face smooth. Palpus in ♂ moderate, rather rough-scaled, third joint rather small. Tongue weak. Antenna in ♂ bipectinate with moderately long branches (apices broken). Pectus and femora hairy. Hindtibia slightly dilated, with hair-pencil and short terminal process, four rather stout spurs. Abdomen very slightly crested. Frenulum slender, from before basal expansion. Forewing rather broad, with costa straight, curved distally, apex moderately rounded, termen smooth, oblique, little curved, cell short, DC incurved, SC^1 free, from close to SC^{2+5}, SC^2 normal (only just before SC^5), R^1 very shortly stalked, M^1 approximated to R^3; hindwing with apex moderate, termen slightly curved, tornus produced but not acute, inner margin very long, cell short, DC somewhat curved, C approximated to cell for some distance near base, then moderately divergent, SC^2 short-stalked, R^2 normal, M^1 short-stalked.

Early stages unknown.

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1 **Comibæna latilinea, nov. sp.** — ♂, 27 mm. Green, of about the colour of *obsoletaria*, Leech (faded), with two broad, straight white lines, the antemedian from costa at one-third to inner margin at nearly one-half, thickening at inner margin, the postmedian from costa at three fourths to inner margin at beyond three-fourths; discal dot small, reddish-black; termen waved, terminal line dark red, connected at the vein-ends with red spots in the fringe in such a way as to suggest a more strongly crenulate margin; fringe otherwise white. Hindwing without the white lines; terminal line and fringe as in forewing. Underside of forewing with costa broadly shaded with reddish, discal spot much larger than above, redder, postmedian line present, diffuse; of hindwing unmarked; both wings with terminal line and fringe as above. Pu-tsu-Fong, W. China, 9820 feet, June to July, 1899. Type (ex coll. Leech) in coll. Brit. Mus. Unfortunately the specimen is in poor condition, the face being abraded, abdomen discoloured, hindlegs lost; but it is certainly a typical *Comibaena*, and easily recognizable by the characters here given. In the forewing SC^1 arises from the cell and anastomoses shortly with C, SC^2 arises before SC^5, R^1 is separate; in the hindwing M^1 is approximated to R^3.

2) **Comibæna apicipicta, nov. sp.** — ♂, 28 mm. Face reddish above, white beneath. Palpus whitish, marked with fuscous. Vertex whitish, occiput green. Thorax and basal part of abdomen green above, white beneath, end of abdomen wholly white. Forefemur and foretibia heavily spotted with dark fuscous; hindtibia not dilated, without process. Wings of the same green as in *delineata*, Warren, and similarly strigulated with silvery; wholly without lines; forewing with minute black discal dot and dull reddish terminal line, fringe yellowish green; hindwing with the discal spot sometimes larger (more elongate), terminal line as in forewing, but here marked with a black line at apex, a thicker one between SC^2 and R^1 and a short weak one between R^1 and R^2, the middle line accompanied proximally by a small, bright pink blotch. Underside nearly white, tinged with green in forewing; discal dots present, forewing with terminal line as above, hindwing with it much weaker (obsolescent), the three black lines remaining, but the pink blotch entirely wanting. Yatung, Tibet (A. E. Hobson). Type and two co-types in coll. Brit. Mus. Manifestly related to *delineata*, Warren, but slightly smaller and of more absolutely typical *Comibaena*-shape, the forewing being less produced at apex and the hindwing at tornus. In the forewing SC^1 is connate (two specimens) or just separate (one), in the last named anastomosing with C; R^1 is longish stalked, SC^5 very long stalked, arising much beyond SC^2.

3) **Comibæna fuscidorsata, nov. sp.** — ♂, 20-28 mm. Like *integranota*, Hampson, except in its larger size and in the following points. Base of abdomen with large fuscous dorsal blotch; underside of hindwing with large dark apical blotch and with a distinct green postdiscal transverse line as in forewing; forewing with SC^1 free or connate (stalked — usually long-stalked — in *integranota*), SC^2 arising before SC^5 (usually after SC^5 in *integranota*). Khasis (type) and Maskeliya, Ceylon (2 sp. div.) in coll. Brit. Mus. The great variability of *integranota* prevents our adding several other points of differentiation which are nevertheless *generally* applicable. The fuscous blotches on both wings are large and dark, of a size and tone which would represent the absolute *maximum* (if not beyond it) in *integranota*; there is also sometimes a small tornal blotch to hindwing which we have never seen in *integranota*. The base of antennal shaft is not green, nor is there any green admixture in the palpus. The termen of forewing is slightly straighter than is normal in *integranota*. Hindtibial process as long as in *integranota*, but as it is shorter in the Ceylon example (though slightly damaged), that possibly represents still another species.

Only the single specimen is known, but it seems very probable that the genus is a rather specialized relative of *Comibaena;* the peculiar shape of the hindwing (strongly elongate to tornus) is distinctive, though there are other subordinate characters.

Type of the genus : *Chlorochaeta longipennis*, Warren (1904).

Geographical distribution of species. — W. Africa.

1. *C. longipennis*, Warren. Niger.
Chlorochaeta longipennis, Warren, Novit. Zool. Vol. 11, p. 464 (1904).

70. Genus RACHEOSPILA, Guenée

Racheospila, Guenée, Spec. Gen. Lép. Vol. 9, p. 372 (1858); Hulst, Trans. Amer. Ent. Soc. Vol. 23, p. 314 (1896).
Blechroma, Möschler, Verh. Zool.-bot. Ges. Wien, Vol. 31, p. 403 (1881).
Miantonota, Warren, Novit. Zool. Vol. 2, p. 89 (1895) (gen. cælebs); Vol. 4, p. 425 (1897).
Lissochlora, Warren, ibidem, Vol. 7, p. 134 (1900).

Characters. Face smooth. Palpus with second joint usually rather long, more or less strongly rough-scaled above and beneath, third joint smooth, in ♂ quite small to moderate, sometimes deflexed as in *Comibaena*, in ♀ long to very long (moderate in a few species only). Tongue present. Antenna moderate (rather long in some, at least, of the *erina*-group), in ♂ bipectinate with short to moderate (in Section II longer) branches, apex nearly simple; in ♀ nearly simple (in Section III shortly bipectinate). Pectus hairy. Femora glabrous [1]. Hindtibia in ♂ nearly always dilated with hair-pencil, with rare exceptions also with well-developed terminal process. Abdomen not or scarcely crested, but very often ornamented with discolorous spots, which (especially in Section II) are frequently somewhat embossed and occasionally somewhat erected posteriorly as diminutive crests. Wing-scaling not very dense, but not translucent. Frenulum in ♂ not very strongly developed, arising from before basal expansion, in ♀ consisting of a moderately strong tuft of hairs. Forewing with costa nearly straight or slightly arched, apex moderate to rather acute, termen straight or slightly curved, moderately oblique, tornus usually rather pronounced, cell less than one-half, DC curved, SC^1 from cell free or anastomosing with C, SC^2 normal (except in *minor*), scarcely ever anastomosing with SC^1, R^1 short-stalked, connate or separate, M^1 connate or separate, rarely short-stalked; hindwing with costa not long, apex moderate, termen convex, either quite smooth or gently waved, frequently slightly prominent at R^3 (in this case sometimes nearly straight on either side of the prominence), but never with sharp angle or tail, tornus pronounced, cell more or less short, DC incurved, C approximated to cell for a short or quite moderate distance near base (in Section II usually anastomosing at a point or very shortly), SC^2 stalked, M^1 stalked, connate or separate (Pl. 2, Fig. 13).

Larva. — Mostly unknown. That of *sitellaria* (which may be taken as representative of Section II) has the head rounded, slightly retracted, luteous with dense white granules; body green, with dense, secondary, pointed white granules; angular subventral projections on abdominal segments 2 to 6, bearing tubercles IV and V; tubercle IV large, a long cone with many little spines to which various objects adhere; tubercles I to III small, V larger, VI and VII small; the large tubercles are IV of abdominal segments 3 to 6, and III of segment 2, as is normal in the group. On flower-heads of *Lantana camara* (Dyar, *Proc. Ent. Soc. Wash.* Vol. 4, p. 457). The larvæ of *rubrifrontaria* (Packard, *Mon. Geom. U. S. A.*

1. We have only observed some hairiness on the middle- and hindfemora of *paricipuncta*.

p. 387) and *rubrolinearia* (Hulst, *Ent. Amer.* Vol. 3. p. 72) have probably much in common with this, but are (like the imagines) transitional towards *Nemoria* (*Aplodes*).

Pupa. — Scarcely described. That of *rubrifrontaria* green, profusely dark dotted and with black dorsal band, last segment hoof-shaped, with two reddish hooks (Packard, loc. cit. p. 387).

A large genus, akin to *Comibaena*, but differing in the well-developed ♀ frenulum. The retention of this side by side with an advance in the ♂ structure is, as we pointed out in our Introduction, characteristic of certain American genera, which we here place together. Section I differs further from *Comibaena* in the usually quite short antennal pectinations, and in the more variable palpus; Section II in the frequent brief anastomosis of vein C of the hindwing with the cell. We have made various attempts to divide the genus into two or more on some reliable structural characters, but have found it impracticable; it is even doubtful whether *Nemoria* (*Aplodes*, auctt.) as at present understood can be sharply differentiated from it, but as the last-named conception has had such very general currency, and the ♀ palpus of *Nemoria* is so widely different from that which is usual in *Racheospila*, we have let it stand. We recognize in *Racheospila* three Sections, of which the second could easily have been made a genus had the anastomosis of C of the hindwing with the cell not here proved inconstant. In Section I there is a good deal of diversity of facies, and this is *in part* correlated with recognizable differences of structure, so that we have thought it worth while to place the species roughly in groups. It is curious that the two or three species found in the United States have the ♀ palpus less differentiated from *Nemoria* than the vast majority, at least, of these from Central- and South America. The *lixaria*-group, then, has the third joint of the palpus in ♀ moderate or longish, never very long, M^1 of hindwing stalked, dorsal ornamentation usually white, surrounded with red; the *albociliaria*-group, M^1 well separate [1]), dorsal ornamentation as in the preceding; the *diarita*-group, M^1 about connate, dorsal ornamentation variable, rarely very conspicuous; the *integra*-group, M^1 stalked, dorsal ornamentation commonly consisting of fuscous blotches; the *erina*-group, nearly as preceding, but larger moths, with longer antennæ, the wings more rounded and nearly always more or less marked with fuscous; the *conspersa*-group [2]), with wings also tolerably rounded, heavily marked with fuscous, M^1 separate, SC^1 of forewing free; the *rufipicta*-group, near preceding but more slender and glossy, SC^1 of forewing anastomosing with C; the *venilineata*-group (gen. div.?), with SC^2 of forewing anastomosing strongly with SC^1, M^1 of both wings widely separate; the *lafayaria* group, with dorsal ornamentation as in Section II, palpus even more densely rough-haired than in that, M^1 connate or just separate, antennal pectinations short, C of hindwing not anastomosing with cell.

Type of the genus : *Racheospila lixaria*, Guenée (1806).

Geographical distribution of species. — Neotropical; a few species Nearctic.

Section I. — Hindwing with C never anastomosing, M^1 varying according to the group, abdomen very rarely with embossed spots, antenna in ♂ with short or quite moderate pectinations, in ♀ not pectinate.

a) The *lixaria*-group (*Racheospila*, sens. str.).

1. *R. lixaria*, Guenée. Florida, ? Arizona.

Racheospila lixaria, Guenée, Spec. Gén. Lép. Vol. 9, p. 374 (1858).

1) The general constancy of M^1 of the hindwing in the various groups of this genus suggests the hope that possibly some use make ultimately be made of it in taxonomy. Our studies of the Old-World fauna had resulted in our so largely distrusting it that it was not until a late stage of our revision that we realized its apparent utility; consequently we have not even noted its position in some of the species which we studied earlier, and one or two of our placings may need modification.

2) We might pretty safely have called this the *exertata* group, but are unacquainted with Moschler's species in nature.

Geometra [illegible] Walker, List Lep. Ins. Brit. Mus. Vol. 22, p. 508 (1862).
Racheospila inquinaria Dyar, The Canad. Entom. Vol. 40, p. 171 (1908).
Racheospila terraria Pearsall, Science Bull. Brooklyn Inst. Mus. Vol. 1 (8), p. 4 (1908).

2. *R. extremaria*, Walker. — Eastern N. America.

Racheospila extremaria Walker, List Lep. Ins. Brit. Mus. Vol. 22, p. 584 (1861).
Aplodes rubromarginaria Packard, Mon. Geom. U. S. A. p. 380, t. 13, f. 44 (1876).
Aplodes rubromarginaria Dyar, Bull. U. S. Nat. Mus. No. 52, p. 202 (1902).
Racheospila brivia Dyar, The Canad. Entom. Vol. 40, p. 171 (1908) (Ohio, Guinee).

3. *R. rubrolinearia* (Packard). — Eastern U. S. A.

Aplodes rubrolinearia Packard, Rep. Peabody Acad. Sci. Vol. 5, p. 74 (1873).
Scotosia rubrolinearia Gumppenberg, Nova Acta Acad. Leopold. Naturf. Halle, Vol. 64, p. 108 (1895).

4. *R. rubritrontaria*, Packard. — Eastern N. America.

Racheospila rubritrontaria Packard, Rep. Peabody Acad. Sci. Vol. 5, p. 76 (1873).
Aplodes rubritrontaria Packard, Mon. Geom. U. S. A. p. 380, t. 13, f. 45 (1876).
Aplodes packardaria Grote, New Check List N. Amer. Moths, p. 40 (1882).

5. *R. catachla* (Hulst) (huj. gen.?). — Florida.

Iodis catachla Hulst, The Canad. Entom. Vol. [illegible], p. [illegible] (1900).

(1) The *acca Elaria*-group).

6. *R. albociliaria* (Herrich-Schaffer). — Guiana and Peru to Rio.

Geometra albociliaria Herrich-Schaffer, Samml. Aussereur. Schmett. Vol. 1, t. 61, f. 344 (1855), p. 12, 82 (1856).
Racheospila fimbriaria Guenee, Spec. Gen. Lép. Vol. 10, p. 57 (1858).
Racheospila unipuncta Warren, Novit. Zool. Vol. 7, p. 148 (1900) (nec syn.).
Racheospila punctaria Warren, ibidem, Vol. 11, p. 30 (1904).
Racheospila [illegible] Warren, ibidem, p. [illegible] (1904) (nec syn.).

7. *R. roseilinearia*, Dognin. — Ecuador.

Racheospila roseilinearia Dognin, Le Naturaliste Vol. [illegible] (1895).

8. *R. acosa* (Dognin) (2). — Ecuador.

Geometra acosa Dognin, Ann. Soc. Ent. Belg. Vol. 42, p. 215 (1898).

9. *R. licada* (Dognin). — Ecuador.

Geometra licada, Dognin, Ann. Soc. Ent. Belg. Vol. 42, p. 215 (1898).

10. *R. calida* (Dognin). — Ecuador.

Geometra calida, Dognin, Ann. Soc. Ent. Belg. Vol. [illegible], p. [illegible] (1898).

11. *R. penna*, Dognin. — Ecuador.

Racheospila penna, Dognin, Ann. Soc. Ent. Belg. Vol. 42, p. [illegible] (1898).

12. *R. alboseriata*, Warren. — Mexico, Venezuela, Colombia.

Racheospila alboseriata, Warren, Novit. Zool. Vol. [illegible], p. [illegible] (1906).

13. *R. rufiguttata*, Warren. — Venezuela.

Racheospila rufiguttata, Warren, Novit. Zool. p. [illegible] (1906).

14. *R. diaphana*, Warren. — Peru.

Racheospila diaphana Warren, Novit. Zool. Vol. 8, p. 450 (1901).

15. *R. unocincta*, Warren. — Peru.

Racheospila unocincta Warren, Novit. Zool. Vol. 8, p. 450 (1901).

1) *Leucorachis* Warren, MS., in Mus. Tring. In case our genus should require renaming, we would propose to adopt *Leucorachis* for the present genus. Warren (MS.) has also applied it to *dentilinea*, *parviperata*, *remota* and *rufiguttata*, of which *dentilinea remota* and probably *pirsa puncta* are allied to the group.

2) For the placing of this and the two following species, as well as some other rare species, in Dognin's collection we are indebted to the author himself in litt.

16. *R. albilineata* (Warren) (hic ponenda?) — Peru.
Lissochlora albilineata, Warren, Novit. Zool. Vol. 16, p. 70 (1909).

17. *R. plenifimbria*, Dognin. — W. Colombia.
Racheospila plenifimbria, Dognin, Het. Nouv. Amer. Sud (1), p. 20 (1910).

18. *R. inconspicua*, Bastelberger. — W. Colombia.
Racheospila inconspicua, Bastelberger, Intern. Ent. Zeit. Guben, Vol. 5, p. 54 (1911).

c) The *diarita*-group (*Lissochlora*, Warren).

19. *R. bryata* (Felder) (hic ponenda?). — Colombia.
Nemoria bryata, Felder, Reise Novara, Lep. Het. t. 127, f. 12 (1875).

20. *R. delicataria* (Möschler). — Surinam.
Nemoria delicataria, Möschler, Verh. Zool.-bot. Ges. Wien, Vol. 31, p. 402, t. 17, f. 9 (1881).

21. *R. mollissima* (Dognin). — Ecuador.
Nemoria mollissima, Dognin, Le Naturaliste, Vol. 14, p. 186 (1892).
Microloxia mollissima, Warren, Novit. Zool. Vol. 7, p. 135 (1900).

22. *R. flavifimbria* (Warren). — Colombia.
Aplodes flavifimbria, Warren, Novit. Zool. Vol. 4, p. 423 (1897).
Lissochlora flavifimbria, Warren, ibidem, Vol. 7, p. 135 (1900).

23. *R. liriata* (Dognin). — Ecuador to Colombia.
Geometra liriata, Dognin, Ann. Soc. Ent. Belg. Vol. 42, p. 213 (1898).

24. *R. latuta* (Dognin). — Ecuador.
Geometra latuta, Dognin, Ann. Soc. Ent. Belg. Vol. 42, p. 213 (1898).

25. *R. diarita* (Dognin). — Ecuador, Peru, N. Argentina.
Geometra diarita, Dognin, Ann. Soc. Ent. Belg. Vol. 42, p. 214 (1898).

26. *R. iguala* (Dognin). — Ecuador.
Geometra iguala, Dognin, Ann. Soc. Ent. Belg. Vol. 42, p. 214 (1898).

27. *R. pasama* (Dognin). — Ecuador.
Geometra pasama, Dognin, Ann. Soc. Ent. Belg. Vol. 42, p. 214 (1898).

28. *R. parvipuncta*, Warren. — British Guiana.
Racheospila parvipuncta, Warren, Novit. Zool. Vol. 7, p. 138 (1900).

29. *R. nigricornis* (Warren). — Peru.
Lissochlora (?) *nigricornis*, Warren, Novit. Zool. Vol. 14, p. 204 (1907).

30. *R. sanguinipunctata* (Dognin) (huj. gen. ?). — Argentina.
Lissochlora sanguinipunctata, Dognin, Ann. Soc. Ent. Belg. Vol. 50, p. 204 (1906).

31. *R. minor* (Warren) (gen. div.?) [1]. — Peru.
Melochlora minor, Warren, Novit. Zool. Vol. 14, p. 205 (1907).

32. *R. marcida* (Warren) (hic ponenda?). — Upper Amazon.
Lissochlora (?) *marcida*, Warren, Novit. Zool. Vol. 16, p. 70 (1909).

33. *R. viridifimbria* (Dognin). — Columbia.
Lissochlora viridifimbria, Dognin, Mém. Soc. Ent. Belg. Vol. 18, p. 101 (1911).

34. **R. ella, nov. sp.** [2]. Prout. — Colombia.

1) Somewhat erratic in shape, ♀ palpus quite short and slender (♂ unknown), pectinations very short, SC^2 of forewing stalked beyond SC^5. Might form a new genus

2) **Racheospila ella, nov sp.** — ♂, 24 mm. Head and face green, a narrow white band at lower edge of face, a broad white band between antennæ. Palpus pale green, narrowly white beneath, third joint moderate, exposed. Antennal shaft white at base, ochreous distally, pectinations short. Thorax and abdomen green above, the latter narrowly belted with white at the extremity of the segments. Forewing broad, costa slightly arched, apex rather acute, termen straight, tornus pronounced; bright green, costal edge narrowly white; lines white, the antemedian from costa at one-fourth to inner margin at one-third, very slightly sinuous, and slightly outangled on M, the postmedian from costa at two-thirds to inner margin at about three-fifths, somewhat incurved in posterior part, lunulate-dentate, the teeth pointing distad; cell-spot rather large, reddish black; terminal line white; fringe pale green (somewhat defective). Hindwing similar, the antemedian line distinct, strongly curved; termen very slightly bulged in middle, but with no appreciable elbow. Underside paler, unmarked. Torné, Colombia, August, 1907. Type in coll. L. B. Prout. In many respects similar to *viridifimbria*, but larger, quite differently shaped, terminal line white, the characteristic markings of underside wanting. The structure is normal, SC^1 of forewing free, R^1 separate, M^1 separate, M^2 of hindwing connate; hindtibial process about one-third length of tarsus.

35. **R. eugethes, nov. sp.** 1), Prout. — N. E. Peru.
36. **R. cecilia, nov. sp.** 2), Prout. — E. Peru.

d) The *integra*-group (*Miantonota*, Warren).

37. *R. pacificaria*, Möschler. — Panama to Guianas.
Racheospila pacificaria, Möschler, Verh. Zool.-bot. Ges. Wien, Vol. 31, p. 403, t. 17, f. 13 (1881).
38. *R. carbina* (Druce) (hic ponenda?). — Mexico.
Geometra carbina, Druce, Biol. Centr. Amer. Lep. Het. Vol. 2, p. 84, t. 49, f. 8 (1892).
Racheospila carbina, Warren, Novit. Zool. Vol. 7, p. 138 (1900).
39. *R. integra* (Warren). — Mexico to Brazil.
Miantonota integra, Warren, Novit. Zool. Vol. 2, p. 60, nom. nud., Vol. 4, p. 425 (1897).
40. *R. dentilinea*, Warren. — Trinidad to Brazil and N. Argentina.
Racheospila dentilinea, Warren, Novit. Zool. Vol. 4, p. 430 (1897).
Enospila tenuilinea, Kaye, Trans. Ent. Soc. Lond. p. 147, t. 6, f. 16 (1901) (nov. syn.).
Miantonota dentilinea, Warren, Novit. Zool. Vol. 16, p. 81 (1909).
41. *R. xalivia* (Dognin). — Ecuador, Guianas.
Geometra xalivia, Dognin, Ann. Soc. Ent. Belg. Vol. 42, p. 212 (1898).
Miantonota xalivia, Warren, Novit. Zool. Vol. 14, p. 206 (1907).
42. *R. tutala* (Dognin). — Panama, Ecuador.
Geometra tutala, Dognin, Ann. Soc. Ent. Belg. Vol. 42, p. 213 (1898).
43. *R. incognita* (Warren) (hic ponenda?). — Loc. ignot.
Lissochlora incognita, Warren, Novit. Zool. Vol. 7, p. 135 (1900) 3).
44. *R. remota*, Warren. — Costa Rica.
Racheospila remota, Warren, Novit. Zool. Vol. 7, p. 130 (1900).
Miantonota remota, Warren, ibidem, Vol. 8, p. 447 (1901).
45. *R. viridicincta*, Schaus. — S. E. Brazil.
Racheospila viridicincta, Schaus, Trans. Amer. Ent. Soc. Vol. 27, p. 252 (1901).
46. *R. gortaria*, Schaus. — S. E. Brazil.
Racheospila gortaria, Schaus, Trans. Amer. Ent. Soc. Vol. 27, p. 252 (1901).
47. *R. cosmeta*, nov. nom., Prout. — Mexico.
Miantonota decorata, Warren, Novit. Zool. Vol. 11, p. 22 (1904) nec *Racheospila decorata*, Warren, 1901.

1) **Racheospila eugethes, nov. sp.** ♂. 30 mm. Face green, palpus whitish green, terminal joint small, marked with red-brown. Antennal shaft white basally, ochreous distally, pectinations short. Vertex white, occiput green, a bar of crimson separating the two colours. Thorax and part of abdomen green above, whitish beneath; second abdominal segment with a large, pure white dorsal spot, broadly margined with crimson, except posteriorly; dorsum of fourth to sixth abdominals duller crimson, enclosing a white spot on each segment. Forewing with costa slighty arched posteriorly, apex moderate, termen almost straight, only very slightly curved near apex; costa ochreous tinged with crimson, more strongly so near base, extreme edge snow-white throughout; lines white, consisting of rather large, isolated vein-dots, antemedian from costa at about one fifth, obliquely outwards to M, where the dot is quite near the base of M^2, thence less oblique, the postmedian only distinct from R^1 (where the dot stands at nearly 3 mm. from termen), scarcely perceptibly curved to M^1, then strongly inbent, the dots at M^2, SM^1 and SM^2 standing at 4 mm. from termen; discal dot reddish black, rather large; terminal line bright crimson proximally, very narrowly white distally, the crimson thickening slightly at the vein-ends, so as to encroach on the white. Hindwing similar excepting the costa, the antemedian line as distinct as the postmedian; termen gently rounded. Underside paler, costa of forewing more crimson tinged, base more broadly crimson, cell-spots present, less prominent than above, crimson terminal line more slender, a good deal interrupted posteriorly on forewing, on hindwing only present from apex to R^1. Huancabamba, Cerro del Pasco, E. Peru. Type in coll. L. B. Prout. Differs structurally from *lirrata*, Dognin, with the type of which we have compared it, in the shorter palpus. Venation as in preceding species, except that R^1 is connate; hindlegs lost.

2) **Racheospila cecilia, nov. sp.** — , 20 mm. Head and antenna quite as in preceding species, palpus marked with fuscous on outer side as well as on terminal joint, terminal joint longer. Abdomen dorsally green, apparently quite without ornamentation (discoloured). Forewing with costa straight in proximal half, slightly curved in distal, apex rather acute, termen very straight, tornus pronounced; green with costal edge nearly as in the preceding species, but narrower, vein SC being nearer to the costa; lines white, not very intense, the antemedian from costa at one-fourth to inner margin at one third, slightly sinuous, weakly angled on M and oblique towards inner margin, the postmedian at just over 3 mm. from termen, parallel therewith from inner margin to R^1, very slightly receding from it costad, nearly straight, minutely denticulate on the veins; discal dot almost entirely wanting, an excessively minute dark reddish dot being perceptible on close scrutiny; terminal line nearly as in the preceding species, but with the red finer, interrupted by white at the vein-ends; fringe pale yellow. Hindwing with the antemedian line strongly curved, the postmedian approximately parallel to termen, except about R^3 and M^1 where it makes a strong curve distad; discal spot entirely wanting; terminal line and fringe as in forewing; termen not appreciably bent in middle. Underside paler, the crimson of costa replaced by smoky, which is thickened at base and gradually narrows; no other markings, excepting some interrupted traces of a dark terminal line; fringes paler than above. Cushi, E. Peru, 1820 m. Type in coll. L. B. Prout. Venation as in the preceding species. Hindtibia without the usual dilation and process.

3) *Enospila incognita* on type label.

48. *R. nigrisquama* (Dognin). — S. E. Peru.
Miantonota nigrisquama, Dognin, Ann. Soc. Ent. Belg. Vol. 48, p. 110 (1904).
49. *R. rectilinea* (Warren). — Cuba.
Miantonota rectilinea, Warren, Proc. U. S. Nat. Mus. Vol. 30, p. 420 (1906).
50. *R. imitans* (Warren). — Peru, Colombia.
Miantonota imitans, Warren, Novit. Zool. Vol. 14, p. 206 (1907).
Miantonota imitans ab. *versiplaga*, Dognin, Mém. Soc. Ent. Belg. Vol. 18, p. 101 (1911) (ab.).
51. *R. sellata* (Warren). — Peru.
Miantonota sellata, Warren, Novit. Zool. Vol. 14, p. 206 (1907).
52. *R. consimilis* (Warren). — Peru.
Miantonota consimilis, Warren, Novit. Zool. Vol. 16, p. 81 (1909).
53. *R. fontalis*, Warren. — Upper Amazon.
Racheospila fontalis, Warren, Novit. Zool. Vol. 16, p. 86 (1909).
54. **R. hæmatospila, nov. sp.** 1), Prout. — Brazil.

c) The *erina*-group.

55. *R. erina* (Dognin). — S. America.
Achlora erina, Dognin, Ann. Soc. Ent. Belg. Vol. 40, p. 143 (1896).
Rhodochlora erina ab. *bipunctata*, Dognin, ibidem, Vol. 52, p. 17 (1908) (ab.).
Miantonota erina ab. *disjuncta*, Warren, Novit. Zool. Vol. 16, p. 81 (1909 (ab.).
Geometra apiciata, Schaus, MS. (in coll. E. D. Jones).
56. *R. discipuncta* (Warren). — Bolivia.
Rhodochlora discipuncta, Warren, Novit. Zool. Vol. 7, p. 140 (1900).
57. *R. punctilinea* (Dognin). — Venezuela.
Miantonota punctilinea, Dognin, Ann. Soc. Ent. Belg. Vol. 46, p. 337 (1902).
58. *R. parcipuncta* (Dognin). — French Guiana, Brazil.
Blechroma parcipuncta, Dognin, Ann. Soc. Ent. Belg. Vol. 52, p. 204 (1908).
59. **R. unipunctata, nov. sp.** 2), Prout. — S. Brazil.

f) The *conspersa*-group (*Blechroma*, Möschler).

60. *R. exertata* (Möschler). — Surinam.
Blechroma exertata, Möschler, Verh. Zool.-bot. Ges. Wien, Vol. 31, p. 404, t. 17, f. 11 (1881).

1) **Racheospila hæmatospila, nov. sp.** — ♂, 31 mm. Face green, very narrowly white-edged below. Palpus partly green, whitish on inner side and beneath, terminal joint small, ochreous. Vertex white, occiput green, a bright crimson line separating the two colours. Antennal shaft white basally, ochreous distally, pectinations ochreous, very short. Thorax and abdomen green above, the latter marked with three large crimson spots. Forewing with costa nearly straight, becoming gently curved distally, apex rather pronounced, termen straight; bright green, with the costal edge white nearly to apex, separated from the ground-colour by a narrow shade, which is reddish at base but becomes ochreous; lines whitish, faint, the antemedian from beneath costa before one-fourth, curved and oblique, the postmedian from beneath costa at two-thirds, parallel with termen, denticulate on the veins; discal spot rather small, crimson; terminal line crimson, interrupted by white dots at the vein-ends and followed by a white line at base of fringe, the crimson line continued round apex and along costa for about 1 mm.; fringe interruptedly pink (most strongly so opposite vein ends) proximally, yellowish distally. Hindwing with the same markings, excepting the costal; postmedian line bent on R^3, cell-spot more elongate than in forewing; termen gently rounded, not appreciably elbowed at R^3. Underside paler green, with costa of forewing light pinkish ochreous; discal spot present on forewing, obsolete on hind, lines wanting, terminal line and fringe as above. Preto, Brazil. Type in coll. L. B. Prout. A pretty species, readily recognizable by the crimson abdominal spots. The hindleg is dilated with hair-pencil, but the terminal process is virtually wanting, there being only the slightest possible extension of the tibial sheath. SC^1 of the forewing is free, R^1 connate, M^1 separate.

2) **Racheospila unipunctata** (Staudinger & Bang Haas, MS.), **nov. sp.** — ♂, 34 mm. Face and antennal shaft reddish. Vertex and occiput green. Palpus white on inner side and beneath, first and second joints fuscous on outside; terminal joint very small, white marked with fuscous. Antennal pectinations very short. Thorax and abdomen green above, the latter becoming whitish at anus. Pectus, underside of abdomen, and legs white, forefemur with a large black spot at extremity, foretibia largely fuscous, the hair-tuft wholly so; hindtibia with terminal process fully one-third length of tarsus. Forewing broad, costa arched, strongly so at apex, apex bluntly squared, termen very slightly rounded; green, with small, reddish black cell-spot; the lines composed of small vein-dots, mostly paired, one snow-white, the other dark grey or blackish, the white ones placed proximad in the antemedian line, distad in the postmedian; the white dots are partly or wholly obsolete in the costal half of the wing, leaving only the dark ones distinct; antemedian line strongly curved, postmedian with the dot on SC^5 removed only 2 mm. from termen, minute, the next two progressively receding from termen, the next two almost in alignment with that on R^3, the remaining two (there is none on submedian fold) again very slightly receding; terminal line very faintly paler than in wing, fringe concolorous, with a dark reddish mark at end of SC^4. Hindwing with inner margin less long than in the allies, cell-spot minute, almost obsolete, lines with the white dots not obsolete costally, postmedian formed nearly as in forewing, but with the dot on R^2 more definitely proximad, suggesting a marked incurve of the line distally to the cell. Underside paler green, lines absent, discal dot present on forewing only, reddish mark on fringe at end of SC^4 as above. Rio Grande do Sul (probably Porto Alegre), received through the firm of Staudinger & Bang-Haas. Type in coll. L. B. Prout. Perhaps nearest to *disjuncta*, the type of which is extremely wasted, but apparently has even less markings than the new species. SC^4 is free, R^1 about connate, M^1 just separate, the stalking of M^1 of hindwing rather short.

61. *R. aturia* (Druce). — Mexico to Panama.
Geometra aturia, Druce, Biol. Centr. Amer. Lep. Het. Vol. 2, p. 84, t. 49, f. 9 (1892).
Racheospila albociliaria, Druce, ibidem, p. 89 (1892) (nec Herrich-Schaffer) nov. syn.

62. *R. puntillada*, Dognin. — Ecuador, Peru.
Racheospila puntillada, Dognin, Ann. Soc. Ent. Belg. Vol. 37, p. 81 (1893).
Blechroma nigricincta, Warren, Novit. Zool. Vol. 11, p. 503 (1904) nov. syn.

63. *R. hena*, Dognin (hic ponenda ?). — Ecuador.
Racheospila hena, Dognin, Ann. Soc. Ent. Belg. Vol. 42, p. 217 (1898).

64. *R. conflua* (Warren). — Peru.
Blechroma conflua, Warren, Novit. Zool. Vol. 11, p. 502 (1904).

65. *R. conspersa* (Warren). — Peru, Bolivia.
Blechroma conspersa, Warren, Novit. Zool. Vol. 11, p. 502 (1904).

66. *R. torsilinea* (Warren) (hic ponenda ?). — Paraguay.
Mixocera torsilinea, Warren, Novit. Zool. Vol. 12, p. 44 (1905).

67. *R. oppleta* (Warren). — Peru.
Blechroma oppleta, Warren, Novit. Zool. Vol. 14, p. 201 (1907).

68. **R. magnidiscata, nov. sp.** [1]), Prout. — Guatemala, Costa Rica.
Racheospila albociliaria (part.), Druce, Biol. Centr. Amer. Lep. Het. Vol. 2, p. 89 (1892) nec Herrich-Schaffer.

g) The *floritera*-group.

69. *R. punctiseriata* (Dognin). — Colombia.
Blechroma punctiseriata, Dognin, Het. Nouv. Amer. Sud 1., p. 18 (1910).

70. *R. floritera* (Prout) (prae. ab. ?). — Colombia.
Blechroma floritera, Prout, Ann. Mag. Nat. Hist. (8), Vol. 6, p. 232 (1910).

71. *R. rufipicta* (Prout). — **Pl. 3, Fig. 7.** — Peru.
Blechroma rufipicta, Prout, Ann. Mag. Nat. Hist. (8), Vol. 6, p. 233 (1910).

h) The *venilineata* group.

72. *R. venilineata* (Warren). — Peru.
Lissochlora venilineata, Warren, Novit. Zool. Vol. 14, p. 205 (1907).

i) The *lafayaria*-group.

73. *R. lafayaria* (Dognin). — Ecuador.
Comibaena lafayaria, Dognin, Le Naturaliste, Vol. 14, p. 200 (1892).
Racheospila lafayaria, Prout, Ann. Mag. Nat. Hist. (8), Vol. 6, p. 238 (1910).

74. *R. psittacina*, Prout (prae. var. ?). — **Pl. 3, Fig. 6.** — Peru, Brazil.
Racheospila psittacina, Prout, Ann. Mag. Nat. Hist. (8), Vol. 6, p. 237 (1910).

75. *R. luteifimbria*, Dognin. — Colombia.
Racheospila luteifimbria, Dognin, Ann. Soc. Ent. Belg. Vol. 45, p. 300 (1901).

76. *R. semiornata*, Warren. — Panama, Colombia.
Racheospila semiornata, Warren, Novit. Zool. Vol. 8, p. 450 (1901).

77. *R. promontoria*, Warren. — Peru.
Racheospila promontoria, Warren, Novit. Zool. Vol. 11, p. 20 (1904).

78. *R. syncrasis*, nov. nom., Prout. — Peru.
Racheospila conflua, Warren, Novit. Zool. Vol. 11, p. 500 (1904) (nec p. 502).

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1) **Racheospila magnidiscata, nov. sp.** — ♂, 28 mm. Face, palpus above and antennal shaft reddish brown. Vertex dirty white, with a dull reddish band behind. (Thorax and abdomen discoloured.) Hindtibia strongly dilated, terminal process short. Wings shaped and coloured as in *aturia*, Druce, the markings larger and stronger, dark purplish fuscous: these consist on forewing of: the entire costal edge; a large round blotch enclosing the black cell-mark; irregular lunular markings around this; a postmedian line consisting of a large thick costal lunule at beyond two-third → (reaching to R^1), smaller lunules on either side of R^2 and rather nearer termen, thickened proximally, a few dark scales between R^3 and M^1, again nearer termen, a slender lunule between M^1 and M^2, and a strongly zigzag line (considerably proximad) from M^2 to inner margin; a subterminal series of vein-spots, commencing from two large, confluent ones at costa 3 mm. from apex, and ceasing at M^2; a terminal series of vein-dots. Hindwing with similar antemedian, postmedian, subterminal and terminal series, the discal mark small. Underside of forewing whitish green, the costal half more green, markings of upperside weakly reproduced: of hindwing whitish green, unmarked, only the terminal dots weakly indicated. Volcan de Atitlan 2500–3500 feet (G. C. Champion), ex coll. Godman & Salvin. Type in coll. Brit. Mus. Costa Rica, in coll. Schaus. Distinct from *aturia* in the fuscous costa and terminal dots.

79. *R. fallax*, Warren. — Peru.
Racheospila fallax, Warren, Novit. Zool. Vol. 14, p. 208 (1907).

80. *R. brunneilinea*, Warren. — Peru.
Racheospila semiornata ab. *brunneilinea*, Warren, Novit. Zool. Vol. 14, p. 209 (1907).

81. *R. excelsa*, Dognin. — Colombia.
Racheospila excelsa, Dognin, Hét. Nouv. Amér. Sud, (1), p. 19 (1910).

SECTION II. — Hindwing with C appressed or closely approximated, usually anastomosing at a point or very shortly (almost forming a transition to *Synchlora*), M^1 short-stalked (connate in *dependens* and *tumefacta*, and possibly in one or two others), abdomen with embossed white spots or rudimentary crests, antenna in ♂ with long pectinations, in ♀ not pectinate.

82. *R. gerularia* (Hübner). — Southern United States and W. Indies to Brazil.
Phalaena Geometra ocellata, Stoll, Suppl. Pap. Exot. Cramer, p. 150, 184 [in err. 384], t. 34, f. 9 (1790) (nec Linné).
Comibaena gerularia, Hübner, Verz. bek. Schmett. p. 284 (1826?).
Phalaena ocellata, Verloren, Cat. Ins. Lep. Cramer, p. 269 (1837).
Phorodesma stollaria, Guenée, Spec. Gén. Lép. Vol. 9, p. 370 (1858).
Comibaena ocellata, Walker, List Lep. Ins. Brit. Mus. Vol. 22, p. 570 (1861).
Racheospila marginiplaga, Walker, ibidem, p. 583 (1861).
Geometra stollaria, Herrich-Schäffer, Corr.-Blatt. Zool.-min. Ver. Regensb. Vol. 24, p. 182 (1870).
Racheospila rufidorsaria, Snellen, Tijdschr. v. Ent. Vol. 17, p. 41, t. 3, f. 4 (1874).
Racheospila jucunda, Felder, Reise Novara, Lep. Het. t. 127, f. 18 (1875).
Phorodesma ocellata, Möschler, Verh. Zool.-bot. Ges. Wien, Vol. 31, p. 402 (1881).
Racheospila xysteraria, Hulst, Ent. Amer. Vol. 2, p. 121 (1886).
Geometra ocellata, Moschler, Abhandl. Senckenb. Nat. Ges. Vol. 16, p. 244 (1890).
Synchlora xysteraria, Dyar, Bull. U. S. Nat. Mus. No. 52, p. 301 (1902).
Racheospila pulchella, Warren, MS. (in coll. Brit. Mus.).

83. *R. sitellaria*, Guenée. — W. Indies, Florida.
Racheospila sitellaria, Guenée, Spec. Gén. Lép. Vol. 9, p. 374 (1858).
Geometra congruata, Walker, List Lep. Ins. Brit. Mus. Vol. 22, p. 511 (1861).
Iodis indeclararia, Walker, ibidem, p. 541 (1861).
: *Geometra croceofimbriata*, Herrich-Schäffer, Corr.-Blatt. Zool.-min. Ver. Regensb. Vol. 24, p. 182 (1870).
: *Geometra attendaria*, Möschler, Abhandl. Senckenb. Nat. Ges. Vol. 16, p. 243 (1890) (nov. syn.).
Synchlora louisa var. (?) *hulstiana*, Dyar, Proc. Ent. Soc. Wash. Vol. 4, p. 457 (1901).
Synchlora hulstiana, Dyar, Bull. U. S. Nat. Mus. No. 52, p. 300 (1902).

84. *R. sigillaria*, Guenée. — Mexico and W. Indies to S. Brazil.
Racheospila sigillaria, Guenée, Spec. Gén. Lép. Vol. 9, p. 375 (1858).
Racheospila tenuimarga, Warren, Novit. Zool. Vol. 12, p. 319 (1905).

85. *R. ephippiaria* (Möschler) (prav. var. ?). — Jamaica.
Cambogia ephippiaria, Möschler, Abhandl. Senckenb. Nat. Ges. Vol. 14 (3), p. 68 (1886).

86. *R. expulsata* (Walker). — Brazil to French Guiana.
Eucrostis expulsata, Walker, List Lep. Ins. Brit. Mus. Vol. 22, p. 566 (1861).
Racheospila sigillaria ab. (?) *intensa*, Warren, Novit. Zool. Vol. 7, p. 139 (1900).

87. *R. leucocerata*, Snellen. — Colombia.
Racheospila leucocerata, Snellen, Tijdschr. v. Ent. Vol. 17, p. 41, t. 3, f. 3 (1874).

88. *R. cupedinaria*, Grote. — Florida, Bahamas.
Racheospila cupedinaria, Grote, The Canad. Entom. Vol. 12, p. 218 (1880).
Synchlora louisa, Hulst, ibidem, Vol. 30, p. 159 (1898).
Geometra cupedinaria, Hampson, Ann. Mag. Nat. Hist. (7), Vol. 14, p. 178 (1904).
Synchlora cupidenaria, Dyar, Proc. Ent. Soc. Wash. Vol. 10, p. 34 (1908).

89. *R. atrapes*, Druce. — Panama.
Racheospila atrape Druce, Biol. Centr. Amer. Lep. Het. Vol. 2, p. 91, t. 50, f. 6 (1892).

90. *R. rufilineata* (Warren). — Trinidad to Paraguay, ? Mexico.
Aplodes rufilineata, Warren, Novit. Zool. Vol. 4, p. 423 (1897).
Racheospila undulosa, Kaye, Trans. Ent. Soc. Lond. p. 148, t. 6, f. 23 (1901) nov. syn.

91. *R. pomposa*, Dognin. — Mexico to Peru.
Geometra inclusaria (part.), Druce, Biol. Centr. Amer. Lep. Het. Vol. 2, p. 84 (1892) nec Walker.
Racheospila pomposa, Dognin, Ann. Soc. Ent. Belg. Vol. 42, p. 217 (1898).

92. *R. isolata*, Warren. — Grenada and St. Vincent, ? Peru.
Eucleora ocellata (part.), Hampson, Ann. Mag. Nat. Hist. (6), Vol. 16, p. 332 (1895) nec Stoll).
Racheospila isolata, Warren, Novit. Zool. Vol. 7, p. 138 (1900).

93. *R. astraeoides*, Warren. — Panama to Peru.
Racheospila astraeoides, Warren, Novit. Zool. Vol. 8, p. 448 (1901).

94. *R. bidentifera*, Warren. — Colombia.
Racheospila bidentifera, Warren, Novit. Zool. Vol. 8, p. 449 (1901).

95. *R. decorata*, Warren. — Mexico to Peru.
Racheospila jucunda ?, Druce, Biol. Centr. Amer. Lep. Het. Vol. 2, p. 535 (1892) nec Feld.
Racheospila decorata Warren, Novit. Zool. Vol. 8, p. 449 (1901).

96. *R. dependens*, Warren. — Peru.
Racheospila dependens, Warren, Novit. Zool. Vol. 11, p. 25 (1904).

97. *R. megastigma*, Warren. — Costa Rica.
Racheospila megastigma, Warren, Novit. Zool. Vol. 12, p. 45 (1905).

98. *R. pulchrifimbria*, Warren (*sigillaria* form.?). — Surinam.
Racheospila pulchrifimbria, Warren, Novit. Zool. Vol. 14, p. 209 (1907).

99. *R. venustula*, Dognin. — Ecuador.
Racheospila venustula, Dognin, Hét. Nouv. Amer. Sud (1), p. 19 (1910).

100. *R. tumefacta*, Prout. — Colombia.
Racheospila tumefacta, Prout, Ann. Mag. Nat. Hist. (8), Vol. 6, p. 230 (1910).

101. *R. lesteraria* (Grossbeck). — Arizona.
Synchlora lesteraria Grossbeck, Journ. New York Ent. Soc. Vol. 18, p. 203 (1910).

102. **R. bonhotei, nov. sp.** [1]). Prout. — Bahamas.
Geometra congruata, Hampson, Ann. Mag. Nat. Hist. (7), Vol. 14, p. 178 (1904) nec Walker.

Section III. — Antenna in ♀ bipectinate.

103. *R. astraea*, Druce. — Mexico to Colombia.
Racheospila astraea, Druce, Biol. Centr. Amer. Lep. Het. Vol. 2, p. 90, 535, t. 50, f. 5 (1892).

71. Genus NEMORIA, Hübner

Nemoria. Hübner (*Zutr. Exot. Schmett.* Vol. 1, p. 25, indesc.), Verz. bek. Schmett. p. 285 (1820?) [2]).
Aplodes. Guenée, Spec. Gen. Lép. Vol. 9, p. 376 (1858).

1) **Racheospila bonhotei, nov. sp.** — ♂, 15-17 mm. Like *sigillaria*, Guenee, but smaller, and entirely different in the ornamentation of the abdomen. The abdomen is green dorsally, with a narrow, bright crimson mediodorsal band, which encloses merely three very small (sometimes absolutely minute) white spots on segments 2-4. Discal dots minute, less red than in *sigillaria*. Fringe rather variable, usually mostly red enclosing only restricted white dashes opposite the veins. Face crimson, with two small or larger green spots above middle, and narrowly white below. Hindwing with C anastomosing at a point near base, divergence at first gradual. Bahamas (Andros and Nassau). 5 ♂ in coll. Brit. Mus., all presented by J. L. Bonhote.

2) It is very unfortunate that a change in the usage of this well-known name, and a corresponding loss of another well-known name (*Aplodes*) are necessitated by the Rules of Nomenclature. The first author to select a type for *Nemoria* was Moore (*Lep. Ceyl.* Vol. 3, p. 431, 1887), who chooses *bistriaria*, the species in connection with which the name *Nemoria* was first published (*Zutr. Exot. Schmett.*).

Hipparchiscus. Walsh, Proc. Bost. Soc. Nat. Hist. Vol. 9, p. 300 (1864).
Anaplodes. Packard, Mon. Geom. U. S. A. p. 392 (1876).

Characters. — Face smooth. Palpus rather short to moderate, second joint somewhat rough-scaled beneath, third joint short or rather so in ♂, short to moderate in ♀. Tongue present. Antenna in ♂ bipectinate, apex nearly simple, in ♀ nearly simple. Pectus somewhat hairy. Hindtibia in ♂ more or less dilated, with hair-pencil 1), usually also with a terminal process, in both sexes with all spurs. Abdomen not crested. Frenulum arising from before a slight basal dilatation, but present in both sexes (in ♂ slender, not long). Forewing with costa more or less arched, apex moderate, termen entire, oblique, nearly straight to slightly curved, cell somewhat less than one-half, DC^3 incurved (often strongly), SC^1 anastomosing with C, or free, SC^2 normal, R^1 about connate, M^1 separate; hindwing with apex moderately rounded, termen rounded, sometimes slightly ventricose in middle, but never with appreciable angle or elbow at R^3, cell short, DC^3 oblique, C approximated to cell to rather less than one-half, rather rapidly diverging, SC^2 stalked, sometimes connate or separate.

Egg. — Elliptical, flat above and below, one end a little depressed, no truncation. The hexagonal reticulation slight. Colour shining ochraceous, changing to reddish. Duration nine days (Dyar, *Psyche*, Vol. 11, p. 121, on *darwiniata*).

Larva. — Head rounded bilobed, granular. Body flattened, winged with lateral projections, surface spicular, tubercles and setæ small, obsolete in latest stadia, the setæ with swollen tips, H especially flattened fan-shaped and cleft at tip. Does not bear any attached objects (Dyar, loc. cit., a full description of the five stadia of *darwiniata*). Feeds on trees, etc. Others of the larvæ are known. That of the type species is figured by Packard, t. 13, f. 28.

Pupa. — Apparently not fully described. That of *mimosaria* rather slender, light brown, much dotted with fuscous, anal spine short, moderately stout, with eight unequal curved slender spinules (Walsh, *Proc. Bost. Soc. Nat. Hist.* Vol. 9, p. 301; Packard, *Amer. Nat.* Vol. 18, p. 934).

As above mentioned, this genus is doubtfully differentiable from certain forms in the preceding, although the extremes (as *pistaciaria*), with quite small third joint of palpus in both sexes, are very distinct from normal *Racheospila*. Packard distinguishes *Aplodes* (i. e. typical *Nemoria*) by its narrow face, but makes the face less narrow in *Anaplodes* (which we do not consider tenable generically); we have found too much variation in width in both genera to be able to make any use at all of this distinction.

Type of the genus : *Nemoria bistriaria*, Hübner (Moore sel., 1887).

Geographical distribution of species. — North and Central America.

1. *N. bistriaria*, Hübner. — Eastern U. S. A.
   Nemoria bistriaria, Hubner, Zutr. Exot. Schmett. Vol. 1, p. 25, t. 139, 140 (1819?)
   Anisodes bifilata, Walker, List Lep. Ins. Brit. Mus. Vol. 26, p. 1585 (1862).
   Aplodes brunneata, Packard, Mon. Geom. U. S. A. p. 388, t. 10, p. 88 (1876).
   Aplodes bistriaria, Hulst, Trans. Amer. Ent. Soc. Vol. 23, p. 315 (1896).
   Synchlora mimosaria var. *brunneata*, Gumppenberg, Nova Acta Acad. Leop. d. Naturf. Halle, Vol. 64, p. 498 (1895).
2. *N. mimosaria* (Guenée). — Canada, Eastern U. S. A. to Florida.
   Aplodes mimosaria, Guenée, Spec. Gén. Lép. Vol. 9, p. 377 (1858).
   Iodis tractaria, Walker, List Lep. Ins. Brit. Mus. Vol. 22, p. 540 (1861).
   Hipparchiscus venustus, Walsh, Proc. Bost. Soc. Nat. Hist. Vol. 11, p. 301 (1864).

1) Both Packard and Hulst separate *Anaplodes* (*pistaciaria*) by the *absence* of dilation with hair-pencil, but it is certainly present, though not very strong.

Aplodes approximaria, Packard, Rep. Peab. Acad. Sc. Vol. 5, p. 73 (1873).
Aplodes lattaria, Packard, ibidem, p. 74 (1873).
Aplodes coniferaria, Packard, Amer. Nat. Vol. 18, p. 933 (1884).
Synchlora mimosaria, *lattaria* et *approximaria*, Gumppenberg, Nova Acta Acad. Leop. d. Naturf. Halle, Vol. 64, p. 407, 408 (1895).

3. *N. pistaciaria* (Packard). — California.
Anaplodes pistaciaria, Packard, Mon. Geom. U. S. A. p. 392, t. 13, f. 58 (1870).
Anaplodes pistacearia, Hulst, Ent. Amer. Vol. 2, p. 121 (1886); Trans. Amer. Ent. Soc. Vol. 23, p. 316 (1896).
Euchrostes chloroleucaria var. *unistrigata*, Gumppenberg, Nova Acta Acad. Leop. d. Naturf. Halle, Vol. 64, p. 489 (1895).

4. *N. viridicaria* (Hulst) (huj. gen.?) — Colorado, ? Arizona.
Aplodes viridicaria, Hulst, Bull. Brooklyn Ent. Soc. Vol. 3, p. 41 (1880).
? *Chlorosea albaria*, Grote, The Canad. Entom. Vol. 15, p. 126 (1883).
Anaplodes viridicaria, Dyar, Bull. U. S. Nat. Mus. p. 52, p. 316 (1902).

5. *N. punctolinearia* (Grael). — Western U. S. A.
Aplodes punctolinearia, Grael, Bull. Brooklyn Ent. Soc. Vol. 3, p. 87 (1880); Vol. 4, f. 7 (1881).
Anaplodes punctolinearia, Hulst, Trans. Amer. Ent. Soc. Vol. 23, p. 316 (1896).

6. *N. arizonaria* (Grote). — Arizona.
Aplodes arizonaria, Grote, The Canad. Entom. Vol. 15, p. 125 (1883).
Anaplodes arizonaria, Dyar, Bull. U. S. Nat. Mus. no. 52, p. 302 (1902).

7. *N. festaria* (Hulst) (bon. sp., teste Pearsall, Science Bull. Brooklyn Inst. Mus. Vol. 1 (8), p. 4.) — Arizona.
Anaplodes festaria, Hulst, Ent. Amer. Vol. 2, p. 121 (1886).
Anaplodes arizonaria (part.), Dyar, Bull. U. S. Nat. Mus. no. 52, p. 302 (1902).

8. *N. zygotaria* (Hulst). — Texas.
Aplodes zygotaria, Hulst, Ent. Amer. Vol. 2, p. 121 (1886).
Anaplodes zygotaria, Hulst, Trans. Amer. Ent. Soc. Vol. 23, p. 316 (1896).

9. *N. mustela* (Druce). — Mexico.
Racheospila mustela, Druce, Biol. Centr. Amer. Lep. Het. Vol. 2, p. 90, t. 50, f. 3 (1892).

10. *N. capys* (Druce) (huj. gen.?) — Mexico.
Racheospila capys, Druce, Biol. Centr. Amer. Lep. Het. Vol. 2, p. 90, t. 50, f. 4 (1892).

11. *N. obliqua* (Hulst). — Colorado.
Aplodes obliqua, Hulst, The Canad. Entom. Vol. 30, p. 101 (1898).
Geometra bellonaria, Strecker, Lep. Rhop. Het., Suppl. 2, p. 8 (1899).
Anaplodes obliqua, Dyar, Bull. U. S. Nat. Mus. no. 52, p. 302 (1902).

12. *N. capysoides* (Schaus) (huj. gen.?). — Mexico.
Racheospila capysoides, Schaus, Trans. Amer. Ent. Soc. Vol. 27, p. 251 (1901).

13. *N. darwiniata* (Dyar). — British Columbia.
Aplodes rubritontaria var. *darwinata*, Dyar, Proc. U. S. Nat. Mus. Vol. 37, p. 903 (1904).
Aplodes darwinata, Dyar, Psyche, Vol. 11, p. 121 (1904).
Aplodes darwiniata, Taylor, The Canad. Entom. Vol. 40, p. 100 (1908).

14. *N. hudsonaria* (Taylor). — Alberta.
Aplodes hudsonaria, Taylor, The Canad. Entom. Vol. 38, p. 200 (1906).

15. *N. latirosaria* (Pearsall). — Utah.
Aplodes latirosaria, Pearsall, Science Bull. Brooklyn Inst. Mus. Vol. 1 (8), p. 4, 12 (1906).

16. *N. unilinearia* (Taylor). — British Columbia.
Aplodes unilinearia, Taylor, The Canad. Entom. Vol. 40, p. 60 (1908).

17. *N. delicataria* (Dyar). — California.
Anaplodes delicataria, Dyar, Proc. Ent. Soc. Wash. Vol. 10, p. 57 (1908).

18. *N. splendidaria* (Grossbeck). — Arizona.
Aplodes splendidaria, Grossbeck, Journ. New York Ent. Soc. Vol. 18, p. 204 (1910).

19. *N. strigataria* (Grossbeck). — Arizona.
Aplodes strigataria, Grossbeck, Journ. New York Ent. Soc. Vol. 18, p. 204 (1910).

20. *N. intensaria* (Pearsall). — Utah.
Aplodes intensaria, Pearsall, The Canad. Entom. Vol. 43, p. 251 (1911).

21. **N. mutaticolor, nov. sp.** 1). Prout. — Mexico.
Anaplodes pistaciaria, Druce, Biol. Centr. Amer. Lep. Het. Vol. 2, p. 80, t. 49, f. 20 (1892) (nec Packard).

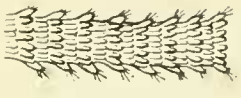
22. **N. cærulescens, nov. sp.** 2). Prout. — New Mexico.

72. Genus DRYADOPSIS, Warren

Dryadopsis. Warren, Novit. Zool. Vol. 4, p. 424 (1897).

Characters. — Face smooth. Palpus with second joint long, rough-scaled above and beneath, third joint in ♂ small, concealed. Tongue present. Antenna in ♂ serrate or subserrate, with fascicles of cilia (Fig. 11). Pectus hairy. Hindtibia in ♂ little dilated, without terminal process, all spurs developed. Abdomen not crested. Frenulum in ♂ (and probably in ♀) from before slight costal expansion. Forewing with costa arched, apex squared, termen rounded, oblique, cell almost one-half, DC curved, SC^1 free, SC^2 normal, R^1 separate, M^1 separate; hindwing with termen rounded, sometimes with an elbow or very slight tooth at R^3, tornus pronounced, inner margin moderately long, cell short (about two-fifths), DC^3 oblique posteriorly, C approximated to cell for some distance, then rather rapidly diverging, SC^2 stalked, M^1 connate or just separate.

Fig. 11



Section of antenna of *Dryadopsis pulveraria*, Schaus. ♂

Early stages unknown.

Scarcely more than a subgenus of *Racheospila* (with the facies of the *Blechroma*-section), differing in the simply serrate ♂ antenna.

Type of the genus : *Dryadopsis morbilliata* (Felder) = *Racheospila morbilliata*, Felder (1897).

Geographical distribution of species. — Neotropical.

1. *D. morbilliata* (Felder). — Brazil.
Racheospila morbilliata, Felder, Reise Novara, Lep. Het. t. 127, f. 16 (1875).
Nemoria morbilliata, Warren, Novit. Zool. Vol. 4, p. 425 (1897).
Dryadopsis morbilliata, Warren, ibidem, p. 425 (1897).

2. *D. pulveraria* (Schaus). — Bolivia, British and French Guiana.
Racheospila pulveraria, Schaus, Trans. Amer. Ent. Soc. Vol. 27, p. 251 (1901).

1) **Nemoria mutaticolor, nov. sp.** — ♂, 32 mm. Wing-shape, strigulation and faint postmedian line as in *pistaciaria*, Packard, but differing in the strongly blue-green colour, absence of discal spots and of red costa beneath. Sierra Madre, Tepic, Mexico (Richardson). Type in coll. Brit. Mus., ex coll. Godman-Salvin. Head and legs are damaged, but the species will be readily recognizable. In the forewing vein SC^1 is free : in all the *pistaciaria* to which we have access it anastomoses with C, but of course this may vary in either or both species.

2) **Nemoria cærulescens, nov. sp.** — ♂, 23 mm. Face reddish. Palpus pale ochreous. Antennal shaft whitish ochreous, pure white basally; pectinations short (not quite twice diameter of shaft). Vertex white, occiput green. Thorax and abdomen green, somewhat more mixed with white beneath. Legs pale ochreous, coxæ bright green anteriorly, white posteriorly; hindtibial process short. Wings rather narrower than in *mimosaria*, costa of forewing and termen of hindwing less rounded. Forewing bright bluish green, with costal edge narrowly white, and with two broad, clear white transverse lines, at about one-third and two-thirds, the antemedian very slightly and regularly curved, the postmedian very slightly outcurved anteriorly, very slightly incurved between R^3 and SM^2; fringe white. Hindwing slightly paler, especially at base, costally whitish; antemedian line strongly curved, postmedian rather broader and more diffuse than on forewing, nearly straight, narrowing and slightly curved distad at inner margin. Underside slightly paler green, the lines distinct, especially the antemedian. La Cueva, at about 5300 feet, Organ Mountains, New Mexico, 31st Aug. (coll. Townsend). Type in coll. Brit. Mus. Forewing with SC^1 free, R^1 short-stalked; hindwing with M^1 connate.

73. Genus SYNCHLORA, Guenée

Synchlora. Guenée, Spec. Gén. Lép. Vol. 9, p. 375 (1858); Hulst, Trans. Amer. Ent. Soc. Vol. 23, p. 314 (1896).

Eunemoria. Packard, Rep. Peab. Acad. Sc. Vol. 5, p. 76 (1873) 1).

Characters. — Face smooth. Palpus with second joint rather long, especially in ♀, slightly rough-scaled beneath, third joint in ♂ short, in ♀ long or very long, smooth-scaled. Tongue present. Antenna in ♂ bipectinate with rather long branches, apical one-third (or more) nearly simple; in ♀ minutely subserrate. Pectus hairy. Femora very slightly hairy. Hindtibia in ♂ dilated with hair-pencil and rather long terminal process, in both sexes with all spurs. Abdomen not crested. Frenulum in both sexes present, from before well-marked basal expansion. Forewing with costa nearly straight, or very slightly arched, apex pronounced, termen straight, or very slightly curved, oblique, cell nearly one-half. DC more or less curved, SC^1 free or anastomosing with C, SC^2 normal, R about connate, M^1 separate; hindwing with termen smooth, more or less rounded, tornus pronounced, cell rather short, C anastomosing to nearly (sometimes fully) one-half cell, SC^2 long-stalked, M^1 connate, approximated or shortly stalked. ♂ genitalia with uncus bifid, widely divided, gnathos strong and pointed, harpe simple, penis pestillate, with two thorns, one at each side of origin of aedeagus; coremata present.

Egg. — Elliptical, strongly flattened on two sides, the flat faces concave; side view slightly wedge-shaped, the broader end truncate roundly; surface all finely hexagonally reticulate; pale, slightly greenish yellow, shining, turning pale red later (Dyar, *Psyche*, Vol. 9, p. 93, on *aerata* — *glaucaria*).

Larva. — Head rounded, bilobed (scarcely so in fourth stadium), shagreened or granulated; body (at least in the later stadia) short and thick, surface strongly granulated, without protuberances, but with the tubercles angularly elevated; setae mostly small, in first stage with flattened enlarged tips; in first stage seta III of second abdominal and IV of third—sixth is highly specialized, long and sticky, with bulbous tip; in later stadia the tubercle itself is enlarged, radiately spinose, sticky, in the fourth stage tubercle II of the ninth abdominal is similarly specialized. To the sticky setae or tubercles the larva attaches fragments of the flowers on which it feeds (asters), thereby concealing itself (Dyar, loc. cit., on *aerata*, the four stadia fully described). *Synchlora denticulariaria* has similar habits, using fragments of the leaves of its foodplants (*Solidago*, etc.); see Dyar, *Ent. News*, Vol. 5, p. 62.

Pupa. — Pale brown, with blackish dorsal line, and more or less dark-marked throughout (Dyar, *Ent. News*, Vol. 5, p. 62, on *denticulariaria*).

A compact genus, distinguished from Section II of *Racheospila* by the stronger and more fixed anastomosis of C of the hindwing and by the loss of the vestigial crests; also superficially by the absence of the red marginal coloration which seems constant in that group. We suspect that *lesteraria*, Grossbeck, with which we are unacquainted, will prove to be a *Racheospila*, Hulst having incorporated Section II of the last-named into *Synchlora*. The larval habit suggests a close relationship with

1) Packard during the same year published two independent — indeed in some respects conflicting — diagnoses of *Eunemoria*. The first publication, in the Report cited above, was in July, according to the printed date in Packard's own separatum, kindly supplied to us by Mr J. A. Grossbeck; this was for the sole species (therefore type) *graciaria*, Packard, a synonym of *aerata*, Fabricius. The later *Eunemoria*, *Proc. Best. Soc. Nat. Hist.* Vol. 16, p. 301 (November or — according to Packard's separate — December), erected with the species *unitaria* and *tricoloraria* (*liquoraria*, Guenée) has therefore no possible standing. Packard himself realized this in preparing his «Monographs», where he states (p. 380) that *Eunemoria* was purely a synonym of *Synchlora* ♂, and creates (p. 375) a new genus *Innemoria* for *unitaria*.

Comibaena; the genitalia, on the other hand, are more suggestive of *Hipparchus*, and seem quite unconnected with those of the *Comibaena*-group.

Type of the genus : *Synchlora liquoraria*. Guenée (1896).

Geographical distribution of species. — North and South America.

1. *S. liquoraria*, Guenée. — California to British Colombia.
   Synchlora liquoraria, Guenée, Spec. Gén. Lép. Vol. 9, p. 375 (1858).
   Eunemoria tricoloraria, Packard, Proc. Bost. Soc. Nat. Hist. Vol. 16, p. 30 (1873).
   Synchlora tricoloraria, Packard, Mon. Geom. U. S. A. p. 381, t. 10, f. 83 (1876).
   Synchlora rubrifrontaria, Dyar, Proc. U. S. Nat. Mus. Vol. 27, p. 903 (1904) teste Taylor, The Canad. Entom. Vol. 40, p. 100) (nec Packard).
   Synchlora glaucaria, Dod, The Canad. Entom. Vol. 38, p. 257 (1906) (nec Guenée).
   Synchlora curvilinea, Warren, MS. (in Coll. Brit. Mus.).
2. *S. herbaria* (Fabricius). — W. Indies.
   Phalaena herbaria, Fabricius, Ent. Syst. Vol. 3 (2), p. 162 (1794).
   Iodis (?) *herbaria*, Walker, List Lep. Ins. Brit. Mus. Vol. 22, p. 605 (1861).
   Lissochlora intacta, Warren, Novit. Zool. Vol. 12, p. 318 (1905).
   Microloxia herbaria, Warren, ibidem, Vol. 16, p. 82 (1906).
3. *S. aerata* (Fabricius). — Eastern U. S. A.
   Phalaena aerata, Fabricius, Suppl. Ent. Syst. p. 456 (1798).
   Aplodes glaucaria, Guenée, Spec. Gén. Lép. Vol. 9, p. 377 (1858).
   Geometra mimicata, Walker, List Lep. Ins. Brit. Mus. Vol. 35, p. 1600 (1866).
   Aplodes rubivora, Riley, First Rep. Ins. Mo. p. 139, t. 2, f. 25 (1869).
   Synchlora albolineata, Packard, Rep. Peab. Acad. Sc. Vol. 5, p. 75 (1873).
   Eunemoria gracilaria, Packard, ibidem, p. 77 (1873).
   Synchlora rubivoraria, Packard, Mon. Geom. U. S. A. p. 382, t. 10, f. 86 (1876).
   Synchlora aerata, Dyar, Bull. U. S. Nat. Mus. No. 52, p. 301 (1902).
4. *S. frondaria*, Guenée. — Mexico and W. Indies to S. Brazil and Uruguay.
   Synchlora frondaria, Guenée, Spec. Gén. Lép. Vol. 9, p. 376 (1858).
   Thalera minuata, Walker, List Lep. Ins. Brit. Mus. Vol. 35, p. 1613 (1866) 1).
   Geometra frondaria, Hampson, Ann. Mag. Nat. Hist. (6), Vol. 16, p. 332 (1895).
   Aplodes frondaria, Prout, Trans. Ent. Soc. Lond. p. 210 (1910).
   Synchlora fuscifrons, Warren, MS. (in coll. Brit. Mus.).
5. *S. denticularia* (Walker). — South and East U. S. A., Bermudas.
   Nemoria (?) *denticularia*, Walker, List Lep. Ins. Brit. Mus. Vol. 22, p. 536 (1861).
   Synchlora excurvaria, Packard, Rep. Peab. Acad. Sc. Vol. 5, p. 76 (1873).
   Synchlora denticulata, Hulst, Trans. Amer. Ent. Soc. Vol. 23, p. 315 (1896).
6. *S. albicostaria* (Herrich Schäffer) (præc. var.?). — W. Indies.
   Eucrostis albicostaria, Herrich-Schäffer, Corr.-Bl. Zool.-min. Ver. Regensb. Vol. 24, p. 181 (1870).
7. *S. rubrifrontaria*, Packard. — Eastern U. S. A.
   Synchlora rubrifrontaria, Packard, Rep. Peab. Acad. Sc. Vol. 5, p. 75 (1873).
   Synchlora rubivoraria var. *infofrontaria* (in err. pro var. *rubrifrontaria*), Gumppenberg, Nova Acta Acad. Leop. d. Naturf. Halle, Vol. 64, p. 500 (1895).
8. *S. nortia*, Druce (huj. gen.?). — Mexico.
   Synchlora (?) *nortia*, Druce, Biol. Centr. Amer. Lep. Het. Vol. 2, p. 93, t. 1, f. 12 (1892).
   Aplodes nortia, Warren, Novit. Zool. Vol. 4, p. 423 (1897).
   Lissochlora (?) *nortia*, Warren, ibidem, Vol. 7, p. 135 (1900).
9. *S. viridipallens*, Hulst (huj. gen.?). — Colorado.
   Synchlora viridipallens, Hulst, Trans. Amer. Ent. Soc. Vol. 23, p. 315 (1896).

1) Vide *Trans. Ent. Soc. Lond.* 1910, p. 210; we have decided that this synonym can be regarded as certain.

10. *S. bistriata* (Warren). — Brazil.
Microloxia bistriata, Warren, Novit. Zool. Vol. 4, p. 420 (1897).
11. *S. texana*, Hulst (huj. gen.?). — Texas.
Synchlora texana, Hulst, The Canad. Entom. Vol. 30, p. 100 (1898).
12. *S. pallida* (Warren). — Island of Bonaire.
Aplodes pallida, Warren, Novit. Zool. Vol. 7, p. 131 (1900).
13. *S. dilucida* (Warren). — Brazil.
Microloxia dilucida, Warren, Novit. Zool. Vol. 7, p. 135 (1900).
14. *S. apicata* (Warren) (huj. gen.?). — Brazil.
Microloxia apicata, Warren, Novit. Zool. Vol. 7, p. 136 (1900).
15. *S. delicatula* (Dognin). — French Guiana.
Aplodes delicatula, Dognin, Ann. Soc. Ent. Belg. Vol. 53, p. 87 (1909).
16. **S. dorsuaria, nov. sp.** [1]. Prout. — Antigua.

74. Genus CHLOROSEA, Packard

Chlorosea. Packard, Proc. Bost. Soc. Nat. Hist. Vol. 16, p. 31 (1873).

Characters. — Face smooth. Palpus in both sexes quite moderate, second joint rather stout, strongly rough-scaled, third joint in both sexes quite small, partly concealed. Tongue present, slender. Antenna less than one-half, in ♂ bipectinate almost to apex with rather short branches, in ♀ shortly serrate-dentate. Pectus and femora hairy. Hindtibia in ♂ not dilated, in both sexes with a single pair of moderate, equal spurs (terminals). Abdomen very slightly crested. Frenulum present in both sexes, arising from before a slight basal expansion, ♂ retinaculum rather near base of forewing. Forewing with costa arched, apex rather acute, termen nearly straight, oblique, cell less than one-half, DC deeply inbent, SC^1 (in type) anastomosing with C, SC^2 normal, R^1 just separate, R^2 from above middle, M^1 separate; hindwing with costa rather long, apex rounded, termen rather straight, cell rather short, DC^2 deeply inbent, SC approximated to cell for some distance, SC^2 stalked, R^2 characteristic, M^1 separate.

Early stages unknown.

Type of the genus : *Chlorosea nevadaria*, Packard (1873).

Geographical distribution of species. — Western United States.

1. *C. nevadaria*, Packard. — Western U. S. A.
Chlorosea nevadaria, Packard, Proc. Bost. Soc. Nat. Hist. Vol. 16, p. 31 (1873).
2. *C. proutaria*, Pearsall. — Utah.
Chlorosea proutaria, Pearsall, The Canad. Entom. Vol. 43, p. 250 (1911).
3. **C. roseitacta, nov. sp.** [2]. Prout. — Arizona.

1) **Synchlora dorsuaria, nov. sp.** — ♂, 23 mm. Face green. Vertex white between antennæ, red behind. Occiput green. Base of antennal shaft white. Thorax green above, white beneath. Foreleg partly green, white beneath, tibia marked with red above. Abdomen white, the first four segments dorsally apple-green, segments 2–4 bearing each a white, red margined dorsal spot. Wings bright apple-green. Forewing with costa narrowly pure white, red at base; lines indicated by white dots on the veins, antemedian very ill-defined, postmedian distinct, the dots on R^2 and SM^2 somewhat, and that on SM^1 (the fold) considerably further from termen than the others; cell spot minute but distinct, blackish red. Hindwing similar. Underside whitish green, costal half of forewing greener, costal margin itself tinged with ochreous, becoming white at extreme edge. Antigua, two ♂ (type and cotype) in coll. Oxford Mus.

2) **Chlorosea roseitacta, nov. sp.** — ♂, 30 mm. Face and palpus rosy (somewhat abraded). Vertex broadly white, faintly tinged with pink behind; occiput green. Antennal shaft white; pectinations short (about twice width of shaft). Thorax green above and beneath. Femora green, tibiæ and tarsi whitish, foretibia rosy on inner side. Abdomen white, anteriorly with a dorsal pattern, the second, third and fourth segments being partly pink, enclosing very large, subtriangular white blotches, their apices directed cephalad. Wings shaped nearly as in *nevadaria*, the costa (except distally) and termen of forewing still straighter, the wing therefore appearing more triangular, sharper; colour as in that species, costal half of hindwing slightly whiter, tornus slightly deeper green; line on forewing placed as in *nevadaria*, but more slender; that on hindwing likewise more slender, distinct at inner margin, but losing itself costally to middle of wing; costa of forewing very narrowly white, except basally; inner margin of hindwing with a rosy streak from postmedian line basewards for 2 mm.; at its proximal extremity there is a faint suggestion of the commencement of an antemedian white line; fringes green proximally, white distally. Underside somewhat paler, postmedian line fainter, no rosy streak on inner margin of hindwing. Palmerlee, Arizona. Type in coll. L. B. Prout. Structure as in *nevadaria*, but SC^1 of forewing free. Readily distinguished by its small size and the rosy mark on the hindwing.

75. Genus CHETEOSCELIS, nov. gen., Prout

Cheteoscelis, nov. gen. Prout.

Annemoria (part. . Hulst, Trans. Amer. Ent. Soc. Vol. 23, p. 312 (1896) (nec Packard).

Characters. — Face smooth. Palpus in both sexes moderate, second joint rough-scaled, third joint small but distinct. Tongue present. Antenna in ♂ bipectinate with moderate branches, in ♀ dentate or shortly bipectinate. Pectus hairy. Femora somewhat hairy. Hindtibia in ♂ not dilated, in both sexes with terminal spurs only. Abdomen not crested. Frenulum in ♂ slender, from before basal expansion, in ♀ wanting or vestigial. Forewing with costa slightly arched, apex rather acute, termen smooth, oblique, slightly curved, cell not quite one-half, DC strongly inbent, very oblique posteriorly, SC^1 from cell, anastomosing with C, SC^2 normal, R^1 about connate, R^2 from near R^1, M^1 about connate; hindwing with costa rather long, apex rounded, termen not strongly convex, tornus moderate, cell somewhat less than one-half, DC^3 deeply incurved, very oblique posteriorly, C anastomosing to nearly three-fourths of cell, SC^2 longish-stalked, R^2 from near R^1, M^1 about connate.

Early stages unknown.

Clearly a derivative of *Chlorosea*. The type specimen of *Annemoria*, Packard, *Mon. Geom. U. S. A.* p. 375 (*unitaria*, Packard, ibidem, p. 376) is, as Mr. R. F. Pearsall informs us, a wreck, without head, hindwings or abdomen, *probably* without anastomosis of C of hindwing; the genus must remain undeterminable until sound specimens are recognized as conspecific, for Packard's indications are inadequate.

Type of the genus : *Cheteoscelis bistriaria* (Packard) = *Chlorosea bistriaria*, Packard.

Geographical distribution of species. — Western North America to Mexico.

1. *C. bistriaria* (Packard). — Western N. America.
   Chlorosea bistriaria, Packard, Mon. Geom. U. S. A. p. 378, l. 13, f. 55 (1876).
   Iplodes undimaria, Strecker, Surv. Dept. Missouri, App. 55, p. 1862 (1878).
   Thetidia bistriaria, Gumppenberg, Nova Acta Acad. Leop. d. Naturf. Halle, Vol. 64, p. 505 (1895).
   Annemoria bistriaria, Hulst, Trans. Amer. Ent. Soc. Vol. 23, p. 312 (1896).
2. *C. graefiaria* (Hulst) (huj. gen. ?). — Western U. S. A.
   Chlorosea graefiaria, Hulst, Ent. Amer. Vol. 2, p. 123 (1886).
   Annemoria graefiaria, Hulst, Trans. Amer. Ent. Soc. Vol. 23, p. 312 (1896).
3. *C. naenia* (Druce). — Mexico.
   Omphax naenia, Druce, Biol. Centr. Amer. Lep. Het. Vol. 2, p. 86, l. 49, f. 13 (1892).
4. *C. pectinaria* (Grossbeck). — Arizona.
   Annemoria pectinaria, Grossbeck, Journ. New York Ent. Soc. Vol. 18, p. 202 (1910).

76. Genus PAROMPHACODES, Warren

Paromphacodes. Warren, Novit. Zool. Vol. 4, p. 428 (1897).

Characters. — Face smooth. Palpus in both sexes very short, slender, third joint pointed. Tongue present. Antenna short, in ♂ bipectinate to apex with moderate pectinations (becoming very short at apex), in ♀ with strong serrations (the proximal ones almost becoming short, stout, pointed pectinations). Pectus hairy. Femora nearly glabrous. Hindtibia in ♂ not dilated, in both sexes with all spurs. Abdomen not crested. Frenulum in ♂ short and slender, from before a moderate costal expansion, retinaculum near base of forewing; frenulum in ♀ well developed. Forewing with costa shouldered

at base, otherwise rather straight, apex acute, termen straight, oblique, tornus rather pronounced, cell almost one-half, DC^3 very deeply inbent, SC^1 anastomosing with C, SC^2 from stalk of SC^{3-5}, anastomosing (sometimes strongly) or connected at a point with SC^1, R^1 separate, R^2 from near R^1, M^1 separate; hindwing with costa rather long, apex rounded, termen from R^2 straight, tornus acute, cell almost one-half, DC^3 usually incurved, always rather strongly oblique posteriorly, C approximated, yet not closely, to cell to beyond one-half, gradually diverging, SC^2 stalked, R^2 from near R^1, M^1 separate, M^2 from rather near M^1 (Pl. 2, Fig. 15).

Early stages unknown.

Type of the genus : *Paromphacodes rubrimargo*, Warren (1897).

Geographical distribution of species. — Neotropical.

1. *P. rubrimargo*, Warren. Pl. 3, Fig. 10. S. E. Brazil.
Paromphacodes rubrimargo, Warren, Novit. Zool. Vol. 4, p. 429 (1897).
2. *P. rubristellata*, Warren 1). Colombia.
Paromphacodes rubristellata, Warren, Novit. Zool. Vol. 4, p. 429 (1897).

77. Genus PYROCHLORA, Warren

Pyrochlora, Warren, Novit. Zool. Vol. 2, p. 90 (1895) 2).

Characters. — Face with slight roughened prominence. Palpus in ♂ moderate, second joint rather long, smooth-scaled, third joint quite small (♀ unknown to us, would probably have elongate third joint). Tongue present. Antenna in ♂ bipectinate to little beyond one-half with moderate branches, apex minutely ciliated. Pectus and femora hairy. Foretibia short, densely tufted. Hindtibia in ♂ dilated, with hair-pencil and very short terminal process, all spurs present, approximated, tarsus long. Abdomen not crested. Frenulum in ♂ well developed, arising from before very slight basal expansion (will certainly be present in ♀). Forewing with costa arched, apex moderate, termen nearly straight, oblique, cell less than one-half, DC extremely incurved, SC^1 free, SC^2 normal, R^1 well stalked, M^1 separate; hindwing with apex moderate, termen nearly straight, tornal area long, inner margin long, cell short, DC^3 very deeply incurved, becoming very oblique, C rather shortly approximated to cell, then rapidly diverging, SC^2 stalked, M^1 stalked or approximated, M^2 from near M^1.

Early stages unknown.

Apparently differs little in structure from *Racheospila*, though the coloration and the shape of the hindwing — produced to tornus (termen at right angles with costa) — are distinctive; the extreme form of the discocellulars and the strongly tufted foretibia are also worthy of note.

Type of the genus : *Pyrochlora rhanis* (Cramer) = *Phalaena Geometra rhanis*, Cramer (1895).

Geographical distribution of species. — Neotropical.

1. *P. rhanis* (Cramer). Panama to N. Brazil.
Phalaena Geometra rhanis, Cramer, Pap. Exot. Vol. 2, p. 34, 150, t. 119, f. B, C (1777).
Phalaena Geometra rhanisaria, Stoll, Suppl. Pap. Exot. Cramer, p. 152, t. 34, f. 2, 2*b* (1790).

1) Differs from the type in having the palpus quite moderate, not «very short», but agrees well otherwise, SC^2 anastomoses with SC^1 before the latter parts from C.

2) Not preoccupied by *Pyrochloris*, Klug (1839).

Comibaena rhanisaria, Hubner, Verz. bek. Schmett. p. 284 (1826?).
Phalaena rhanisaria, Verloren, Cat. Lep. Ins. Crameri, p. 268 (1837).
Geometra (?) rhanis, Walker, List Lep. Ins. Brit. Mus. Vol. 22, p. 604 (1861).
Comibaena rhanis, Möschler, Verh. Zool.-bot. Ges. Wien, Vol. 31, p. 404 (1881).
Pyrochlora rhanis, Warren, Novit. Zool. Vol. 2, p. 90 (1895).

78. Genus TACHYCHLORA, nov. gen., Prout

Tachychlora, nov. gen. Prout.

Characters. — Face smooth. Palpus in both sexes moderate, second joint strongly rough-scaled, third joint not elongate. Tongue developed. Antenna not long, with moderate tuft of scales at base, in both sexes bipectinate to beyond one-half, apical end very shortly ciliated. Pectus strongly hairy. Femora rough-scaled to somewhat hairy. Foretibia short, well tufted (**Pl. 5, Fig. 19**). Hindtibia with median spurs rudimentary, terminals extremely unequal, no process, hindtarsus considerably longer than tibia. Abdomen not crested. Frenulum present in both sexes, from before slight costal expansion. Forewing with costa slightly arched, apex acute, subfalcate, termen nearly straight, faintly concave, tornus prominent, cell short, produced apically, DC incurved, SC^1 free (anastomosing with C in *uricha*), SC^2 normal, R^1 stalked, M^1 connate or approximated; hindwing with costa rather short, the other margins long and rather straight, apex moderate, rounded, tornus prominent, cell short, DC incurved, C approximated rather shortly to cell, rapidly diverging, SC^2 stalked, M^1 stalked, perhaps sometimes connate (separate in *uricha*).

Early stages unknown.

Perhaps related to *Rhodochlora* (especially *exquisita*), somewhat agreeing in coloration, in the partial atrophy of the median spurs, etc. But as it seems still more closely connected, both in shape and structure, with *Tachyphyle* — scarcely differing essentially except in the presence of the ♀ frenulum — we have thought it better to place it here. The hindwing is similar to that of the preceding genus, but typically still more produced to tornus; the forewing tends to assume the falcate form of *Tachyphyle*. The shape is, however, less characteristic in some species which we provisionally refer here.

Type of the genus : *Tachychlora lepidaria* (Möschler) = *Comibaena lepidaria*, Möschler.

Geographical distribution of species. — Neotropical.

1. *T. lepidaria* (Möschler). — **Pl. 4, Fig. 12.** — Guianas, Colombia.
   Comibaena lepidaria, Möschler, Verh. Zool.-bot. Ges. Wien, Vol. 31, p. 404, t. 17, f. 14 (1881).
2. *T. subscripta* (Warren) (præc. var. vel syn.?). — Venezuela.
   Comibaena subscripta, Warren, Novit. Zool. Vol. 4, p. 424 (1897).
3. *T. silena* (Schaus). — S. E. Brazil.
   Nemoria silena, Schaus, Trans. Amer. Ent. Soc. Vol. 27, p. 252 (1901).
4. *T. uricha* (Kaye) (huj. gen.?). — Trinidad, Surinam.
   Dichorda uricha, Kaye, Trans. Ent. Soc. Lond. p. 147, t. 6, f. 6 (1901).
   Comibaena flavicoma, Warren, Proc. U. S. Nat. Mus. Vol. 30, p. 415 (1906) (nov. syn.) [1].
5. *T. flavidisca* (Warren). — Peru.
   Comibaena flavidisca, Warren, Novit. Zool. Vol. 11, p. 20 (1904).
6. *T. subaurea* (Warren) (huj. gen.?). — Peru.
   Comibaena subaurea, Warren, Novit. Zool. Vol. 14, p. 201 (1907).

1) We have not seen Warren's type, but from the description we judge the synonymy certain

79. Genus TACHYPHYLE, Butler

Tachyphyle. Butler, Trans. Ent. Soc. Lond. p. 329 (1881).

Characters. Face smooth. Palpus shortish to moderate, second joint rough-scaled beneath, third joint smooth, in ♂ quite short, in ♀ quite moderate, little exposed. Tongue present. Antenna moderate to rather short, in ♂ bipectinate with moderately strong branches to beyond one-half, sometimes to rather near apex, apical part subserrate, with minute bristles; in ♀ more or less serrate, with minute bristles. Pectus hairy. Femora nearly glabrous. Hindtibia with median spurs minute, more or less aborted, apparently sometimes entirely obsolete, terminals very unequal. Abdomen not crested. Frenulum in ♂ slender, from before well-marked basal expansion; in ♀ wanting. Forewing with costa rather straight proximally, well arched distally, apex acute, more or less falcate, termen oblique, either very gently concave nearly throughout, or in anterior half only, straight posteriorly, tornus pronounced, cell short, produced apically, DC^3 rather strongly incurved, SC^1 free, SC^2 normal, R^1 stalked, very rarely connate, M^1 very shortly stalked, occasionally connate; hindwing with costa rather short, apex roundly squared, termen long, usually (especially in ♂) quite straight almost to tornus, occasionally moderately rounded, tornus pronounced, inner margin long, cell short, DC^3 somewhat incurved, very rarely at all strongly oblique posteriorly, C approximated to cell rather shortly, in rare cases to middle or slightly beyond, SC^2 stalked, M^1 stalked (nearly always long-stalked, or at least longer-stalked than SC^2), M^2 from near (often close) to end of cell.

Early stages unknown [1]).

A very natural genus; though connected with *Phrudocentra* (which is certainly related) by a few species of intermediate shapes, it can be readily differentiated by the tibial armature, the non-elongate third palpal joint in the ♀, etc. *Dichorda* is another relative, but again has four spurs, differs in the normally-shaped wings, more hairy palpi and legs, non-stalking of M^1, etc.

Type of the genus : *Tachyphyle acuta*, Butler (1881).

Geographical distribution of species. — Neotropical.

1. *T. acuta*, Butler. — Panama to N. Brazil.
   Tachyphyle acuta, Butler, Trans. Ent. Soc. Lond. p. 329 (1881).
2. *T. allineata* (Warren) (prec. var. vel syn.?). — Venezuela to French Guiana.
   Dichorda allineata, Warren, Novit. Zool. Vol. 7, p. 132 (1900).
3. *T. basiplaga* (Walker). — Brazil.
   Geometra basiplaga, Walker, List Lep. Ins. Brit. Mus. Vol. 22, p. 512 (1861).
4. *T. nigroapicalis* (Dognin). — Colombia.
   Nemoria nigroapicalis, Dognin, Ann. Soc. Ent. Belg. Vol. 44, p. 430 (1900).
5. *T. undilineata*, Warren. — British Guiana.
   Tachyphyle undilineata, Warren, Novit. Zool. Vol. 7, p. 140 (1900) [2].
6. *T. occulta*, Warren. — Colombia.
   Tachyphyle occulta, Warren, Novit. Zool. Vol. 8, p. 451 (1901).
7. *T. olivia* (Schaus). — Brazil.
   Phrudocentra olivia, Schaus, Trans. Amer. Ent. Soc. Vol. 27, p. 253 (1901).
8. *T. subaurata*, Warren. — Peru.
   Tachyphyle subaurata, Warren, Novit. Zool. Vol. 11, p. 27 (1904).
9. *T. costiscripta*, Warren. — French Guiana.
   Tachyphyle costiscripta, Warren, Proc. U. S. Nat. Mus. Vol. 30, p. 426 (1906).

1) But see on *Phrudocentra*.
2 *Melychlora undilineata* on type label

10. *T. subfulvata*, Warren (huj. gen.?). — French Guiana.
Tachyphyle subfulvata, Warren, Proc. U. S. Nat. Mus. Vol. 30, p. 427 (1906).
11. *T. albisparsa*, Warren. — Peru.
Tachyphyle albisparsa, Warren, Novit. Zool. Vol. 14, p. 210 (1907).
12. *T. flaccida*, Warren (huj. gen. ?). — Peru, Upper Amazon.
Tachyphyle flaccida, Warren, Novit. Zool. Vol. 16, p. 80 (1909).
13. *T. fuscicosta*, Warren (huj. gen.?). — Upper Amazon.
Tachyphyle fuscicosta, Warren, Novit. Zool. Vol. 16, p. 90 (1909).

80. Genus PHRUDOCENTRA, Warren

Phrudocentra. Warren, Novit. Zool. Vol. 2, p. 90 (1895) (gen. cælebs); Vol. 4, p. 429 (1897).
Melochlora. Warren, ibidem, Vol. 8, p. 445 (1901).
Nesipola. Warren, ibidem, Vol. 16, p. 82 (1909).
? **Hyphalia.** Hübner, Verz. bek. Schmett. p. 303 (1826?) (nom. vetust. sed valde dubium).

Characters. — Face smooth. Palpus longish to very long, second joint rather long, shortly to moderately rough-scaled, third joint smooth, exposed, in ♂ not minute, in ♀ long to very long. Tongue present. Antenna over one-half, in ♂ bipectinate to about two-thirds, with moderate branches (in Section VI to beyond three-fourths with longer branches), in ♀ occasionally bipectinate usually nearly simple. Pectus hairy. Femora glabrous or nearly so. Hindtibia in ♂ typically dilated with strong hair-pencil and moderate terminal process, in both sexes with all spurs, the medians sometimes short, especially in the ♂, but never aborted. Abdomen not crested. Frenulum in ♂ slender, from before well-marked basal expansion, in ♀ wanting. Forewing with costa slightly arched, apex acute, termen oblique, slightly convex (exceptionally apex is falcate, termen slightly concave anteriorly, gibbous posteriorly), cell less than one-half, DC incurved, SC^1 free, SC^2 normal, R^1 connate or just separate; M^1 separate; hindwing somewhat variable in shape, termen rounded, elbowed, or even with a short tail at R^3, inner margin rather long, cell more or less short, DC^3 somewhat incurved, oblique posteriorly, C approximated shortly to cell, or to nearly one-half, rapidly diverging, SC^2 stalked, M^1 usually separate, occasionally connate or short-stalked.

Larva. — Brown, protectively assimilated to withered leaf, the first five abdominal segments apparently with enormously extended dorso-lateral protuberances, forming, from the dorsal view, a continuous plate (Sepp, *Surin. Vlind.* p. 39, t. 16, on *pigraria*, a lost species apparently near *albiceps* and *lucens*, but with a reddish basal patch like *Tachyphyle basiplaga*; hardly possibly in reality a broad-winged *Tachyphyle*).

Type of the genus : *Phrudocentra pupillata*, Warren (1895, 1897).

Geographical distribution of species. — Neotropical; Section VI localized in the W. Indies.

Section I. — ♂ palpus with third joint rather short; ♂ hindleg strongly dilated, with median spurs very short, terminal process developed; ♀ antenna not bipectinate; hindwing with M^1 separate (*Phrudocentra*, Warren).

1. *P. pupillata*, Warren. — Mexico to Colombia and Venezuela.
Nemoria bryata, Druce, Biol. Centr. Amer. Lep. Het. Vol. 2, p. 85 (1892) (nec Felder).
Phrudocentra pupillata, Warren, Novit. Zool. (Vol. 2, p. 90, nom. nud.) Vol. 4, p. 429 (1897).
Melochlora vivida, Warren, ibidem, Vol. 8, p. 446 (1901) (nov. syn.).
Phrudocentra pupillata ab. *submaculata*, Warren, ibidem, p. 448 (1901) (ab. ?).

SECTION II. — ♂ palpus with third joint rather long; ♂ hindleg with terminal process, all spurs developed; ♀ antenna not bipectinate; hindwing with M^1 stalked.

. *P. assa* (Druce).	Costa Rica, ? Peru.
Nemoria assa, Druce, Biol. Centr. Amer. Lep. Het. Vol. 2, p. 85, t. 40, f. 11, 12 (1892).	
? *Tachyphyle aeretincta*, Warren, Novit. Zool. Vol. 11, p. 507 (1904) (nov. syn. .	
3. *P. obliquata* (Warren).	Mexico to Guatemala.
Nemoria iris (part.), Druce, Biol. Centr. Amer. Lep. Het. Vol. 2, p. 85 (1892) (nec Butler).	
Dichorda obliquata, Warren, Novit. Zool. Vol. 11, p. 503 (1904).	
4. **P. mitigata, nov. sp.** 1), Prout (præc. var. ?).	Panama.

SECTION III. — As preceding, but ♂ third joint sometimes moderate, terminal process sometimes wanting, hindwing with M^1 not stalked; aspect of *Tachyphyle*, termen of hindwing rounded.

5. *P. taediata* (Felder).	Amazons.
Nemoria taediata, Felder, Reise Novara, Lep. Het. t. 127, f. 11 (1875).	
6. *P. albiceps* (Warren) (præc. var. ?).	Peru.
Melochlora albiceps, Warren, Novit. Zool. Vol. 11, p. 504 (1904) .	
7. *P. lucens* (Warren).	Peru, Venezuela, Trinidad.
Tachyphyle lucens, Warren, Novit. Zool. Vol. 14, p. 210 (1907).	
8. *P. pigraria* (Sepp) (huj. sect. ?).	Surinam.
Phalaena Geometra pigraria, Sepp, Surin. Vlind. p. 30, t. 16 (1848 ?).	
Geometra pigraria, Walker, List Lep. Ins. Brit. Mus. Vol. 26, p. 1553 (1862 .	
9. **P. niveiceps, nov. sp.** 2), Prout.	N. E. Peru.

SECTION IV. — As preceding, ♂ third joint usually moderate, hindtibia not dilated, hindwing with M^1 not stalked (except in *opaca*); aspect of Section V (*Melochlora*, Warren), termen of hindwing more or less elbowed at R^3 (very slightly in *discata*, *opaca* and *genuflexa*), underside usually elaborately marked.

10. *P. janeira* (Schaus).	Rio Janeiro.
Tachyphyle janeira, Schaus, Journ. New York Ent. Soc. Vol. 5, p. 102 (1897).	
11. *P. trimaculata* (Warren).	Costa Rica to Peru.
Melochlora trimaculata, Warren, Novit. Zool. Vol. 8, p. 445 (1901).	
Melochlora intermedia, Warren, ibidem, Vol. 11, p. 22 (1904) (ab.) (nov. syn.	
12. *P. affinis* (Warren) (præc. form ?).	Guianas to Peru.
Melochlora affinis, Warren, Proc. U. S. Nat. Mus. Vol. 30, p. 417 (1906).	

1) **Phrudocentra mitigata, nov sp.** — ♂. 34 mm. Closely similar to *obliquata*, Warren, but with the postmedian line much more slender, almost obsolete (indicated about as in weakly-marked examples of *pupillata*, by a slightly pale line), slightly dark-margined proximally; hindwing somewhat more ample than in *obliquata*, with M^1 *shortly* stalked, termen bulged about R^3; frenulum very slender; face red. Chiriqui, Panama. Type in coll. L. B. Prout. It is not altogether impossible that, in spite of the differences, this may prove, on comparison of larger and better material, to be a form of the preceding. In our type (though otherwise good) the base and body are badly discoloured in relaxing, so that we cannot speak of the antemedian line. Beneath, the postmedian is quite obsolete.

2) **Phrudocentra niveiceps, nov sp.** — ♂. 30 mm. Head and face pure white, only the occiput green. Palpus quite moderate, rather strongly rough-haired, pale green above, white beneath. Antennal shaft white except at apex, pectinations very short. Thorax green above, white beneath. Legs white, foretibia marked with blackish above, and with the hair-tuft almost wholly black; hindtibia with a rather short but conspicuous process, median spurs developed, unequal. Wings rather dark grey-green, with slight bronzy reflection, distal margins much paler, without sharp demitation; forewing shaped as in *Tachyphyle*, marked with a prominent black cell-spot and two faint, approximated olive lines, the antemedian outbent on base of M^2, the postmedian gently outcurved near costa, thence nearly straight, parallel with termen; hindwing with termen gently rounded, discal spot somewhat smaller than on forewing, lines very weak, the postmedian nearly straight from middle of costa to inner margin somewhat beyond middle; both wings with a fine whitish terminal line, only noticeable in some lights; fringes nearly concolorous with termen, distal half slightly paler than proximal. Underside similar, without the lines; terminal area of forewing whiter, the whole of hindwing somewhat whiter, especially the terminal area, discal dot present on forewing only. Huancabamba, N. E. Peru. Type in coll. L. B. Prout. Reminds superficially of *Tachyphyle occulta*, Warren, but differs structurally. In the hindwing, vein M^1 is (quite exceptionally for this group) very short stalked with R^3.

Melochlora condensata, Warren, Novit. Zool. Vol. 14, p. 205 (1907) (var.?) (nov. syn.) 1).
Melochlora affinis ab. *abscondita*, Warren, ibidem, Vol. 16, p. 80 (1909) (var. vel ab.?).

13. *P. hydatodes* (Warren). — French Guiana.
Melochlora hydatodes, Warren, Proc. U. S. Nat. Mus. Vol. 30, p. 418 (1906).

14. *P. obnubilata* (Warren). — French Guiana.
Melochlora obnubilata, Warren, Proc. U. S. Nat. Mus. Vol. 30, p. 419 (1906).

15. *P. vagilinea* (Warren). — French Guiana, Panama.
Melochlora vagilinea, Warren, Proc. U. S. Nat. Mus. Vol. 30, p. 419 (1906).

16. *P. discata* (Warren). — Peru, French Guiana.
Melochlora discata Warren, Novit. Zool. Vol. 16, p. 80 (1909).

17. *P. opaca* (Butler). — Amazons, French Guiana.
Iodis opaca, Butler, Trans. Ent. Soc. Lond. p. 328 (1881).

18. *P. genuflexa* (Warren). — French Guiana.
Melochlora genuflexa, Warren, Proc. U. S. Nat. Mus. Vol. 30, p. 418 (1906).

Section V. — Near preceding, but with ♀ antenna bipectinate; hindwing typically produced to a small tail at R^3 (*Melochlora*, Warren).

19. *P. neis* (Druce). — Mexico, Central America.
Tachyphyle (?) *neis*, Druce, Biol. Centr. Amer. Lep. Het. Vol. 2, p. 93, t. 50, f. 13, 14 (1892).
Melochlora neis, Warren, Novit. Zool. Vol. 8, p. 445 (1901).

20. *P. tenuis* (Warren) (hic ponenda?). — Trinidad.
Melochlora tenuis, Warren, Novit. Zool. Vol. 16, p. 80 (1909).

21. *P. inquilina* (Dognin) (huj. sect.?). — Colombia.
Melochlora inquilina, Dognin, Mém. Soc. Ent. Belg. Vol. 18, p. 161 (1911).

Section VI. — Antenna rather long, in ♂ bipectinate to beyond three-fourths, with moderately long, well-ciliated branches, each surmounted by a simple stiff hair, in ♀ not bipectinate; ♂ hindtibia rather variable; hindwing rounded or very slightly bent at R^3 (*Nesipola*, Warren) 2).

22. *P. centrifugaria* (Herrich-Schäffer). — Cuba, Florida.
Geometra centrifugaria, Herrich-Schäffer, Corr.-Bl. Zool.-min. Ver. Regensb. Vol. 24, p. 182 (1870).
Geometra protractaria, Herrich-Schäffer, ibidem, p. 182 (1870).
Eucrostis hollandaria, Hulst, Ent. Amer. Vol. 2, p. 122 (1886).
Eucrostis jaspidiaria, Hulst, ibidem, p. 122 (1886).
Racheospila jaspidiaria, Hulst, Trans. Amer. Ent. Soc. Vol. 23, p. 300 (1896).
Racheospila hollandaria, Hulst, ibidem, p. 300 (1896); Holland, Moth Book, p. 336, t. 43, f. 19 (1903).
Synchlora viridipurpurea, Hulst, The Canad. Entom. Vol. 30, p. 159 (1898).
Racheospila centrifugaria, Dyar, Proc. Ent. Soc. Wash. Vol. 10, p. 35 (1908).
Nesipola centrifugaria, Warren, Novit. Zool. Vol. 16, p. 82 (1909).

23. *P. kinstonensis* (Butler). — Jamaica, St. Lucia.
Iodis kinstonensis, Butler, Proc. Zool. Soc. Lond. p. 490 (1878).
Iodis kingstonensis, Kirby, Zool. Rec. Vol. 15, p. 221 (1880).
Cambogia stellataria, Möschler, Abh. Senckenb. Nat. Ges. Vol. 14 (3), p. 68 (1886) (nov. syn.).
Racheospila concentrata, Warren, Novit. Zool. Vol. 4, p. 430 (1897) 3).

1) We have not seen Warren's type of *affinis*, but that of *affinis* ab. *abscondita* is manifestly a form of *condensata*.

2) The species, or forms, referable to this section are very close allies, of very uniform structure and facies, and perhaps mostly belonging to a single protean species. Individual races, such as those of Cuba or of Jamaica, are certainly excessively variable inter se. We had believed the group to be absolutely confined to the West Indies and Florida, but have recently seen a single example of virtually the form of Warren's *concentrata*, labelled « Amazon » in the Oxford Museum.

3) *Leucorachis concentrata* on type label.

24. *P. anomalaria* (Möschler). Porto Rico.
Racheospila anomalaria, Moschler, Abh. Senckenb. Nat. Ges. Vol. 16, p. 243 (1890).
Nesipola anomalaria, Warren, Novit. Zool. Vol. 16, p. 82 (1909).

25. *P. heterospila* (Hampson). Bahamas, St. Lucia.
Euchloris heterospila, Hampson, Ann. Mag. Nat. Hist. (7), Vol. 14, p. 178 (1904 1).
Lissochlora punctata, Warren, Novit. Zool. Vol. 11, p. 504 (1904) nov. syn.
Rhodochlora albimacula, Warren, ibidem, p. 506 (1904).
Nesipola heterospila, Warren, ibidem, Vol. 16, p. 82 (1909).

26. *P. impunctata* (Warren). Dominica.
Nesipola impunctata, Warren, Novit. Zool. Vol. 16, p. 82 (1909)

Section VII. — Species unclassified.

27. *P. phylira* (Cramer) (huj. gen.??) 2). Surinam.
Phalaena Geometra phylira, Cramer, Pap. Exot. Vol. 2, p. 113, 150, t. 170, f. D (1777).
Phalaena phylirata, Fabricius, Spec. Ins. Vol. 2, p. 254 (1781).
Phalaena Geometra viridaria, Stoll, Cramer's Pap. Exot. Vol. 4, p. 158, 252, t. 370, f. G (1781).
Hyphalia philyraria, Hübner, Verz. bek. Schmett. p. 303 (1826?).
Hyphalia festivaria, Hübner, ibidem, p. 303 (1826?).
Phalaena philyrata, Verloren, Cat. Ins. Lep. Crameri, p. 266 (1837).
Iodis phylirata, Guenée, Spec. Gén. Lép. Vol. 9, p. 358 (1858).
Geometra (?) *viridaria*, Walker, List Lep. Ins. Brit. Mus. Vol. 22, p. 604 (1861).

28. *P. loxiaria* (Guenée) (huj. gen.?). Loc. ignot.
Geometra loxiaria, Guenée, Spec. Gén. Lep. Vol. 9, p. 344 (1858).

81. Genus NEAGATHIA, Warren

Neagathia. Warren, Novit. Zool. Vol. 4, p. 426 (1897).

Characters. Face smooth. Palpus in ♂ moderate, in ♀ long, second joint shortly rough-scaled, third joint smooth-scaled, in ♂ rather small, in ♀ long, slender. Tongue present. Antenna slightly over one-half, in ♂ bipectinate with moderate branches, apical two-fifths nearly simple, very shortly ciliated; in ♀ nearly simple. Pectus slightly hairy. Femora glabrous. Hindtibia in ♂ not dilated, in both sexes with all spurs. Abdomen not crested. Frenulum in ♂ slender, from before moderate basal expansion, in ♀ wanting. Wings smoothly scaled, somewhat hyaline or iridescent. Forewing with costa slightly arched, apex acute, termen very faintly incurved anteriorly, outcurved in middle, rather strongly oblique towards tornus, cell less than one-half, DC incurved, SC^1 from cell, free, SC^2 normal, R^1 just separate, M^1 separate; hindwing with apex slightly cut away, termen slightly toothed at R^1, with a small tail at R^3, weakly incurved between, straight from R^3 to tornus, tornus sharp, inner margin rather long, cell scarcely two-fifths, DC^2 slightly incurved, DC^3 curved or oblique, C approximated to cell to nearly one-half, then moderately diverging, SC^2 stalked, R^2 very little above middle, M^1 approximated or almost connate.

Early stages unknown.

1) Hampson's name was published 31st August, both Warren's in September.

2) This species, though quite recognizably figured is entirely unknown to us, and to those entomologists whom we have consulted. Mr. Warren (in litt.) suggests that there is just a bare possibility it may represent a lost *Melochlora*. It was made the type of the genus *Hyphalia* by Hübner, therefore its rediscovery will almost inevitably result in a change in the generic nomenclature

Shape and facies rather distinctive, characters otherwise not salient. We have found no tangible distinction from certain species of *Phrudocentra* (notably *obnubilata*) excepting the tooth at R^1 of the hindwing, and the two genera may very probably have to be merged.

Type of the genus : *Neagathia corruptata* (Felder) = *Nemoria* (?) *corruptata*, Felder (1897).

Geographical distribution of species. — Neotropical.

1. *N. corruptata* (Felder). — Costa Rica to Guianas and Amazons.
   Nemoria (?) *corruptata*, Felder, Reise Novara, Lep. Het. t. 127, f. 6 (1875).
   Neagathia corruptata, Warren, Novit. Zool. Vol. 4, p. 426 (1897).
2. *N. vitiosaria* (Dognin). — Ecuador.
   Nemoria (?) *vitiosaria*, Dognin, Le Naturaliste, Vol. 14, p. 186 (1892).
2. *N. semilucida*, Schaus (*corruptata* var.?). — Brazil.
   Neagathia semilucida, Schaus, Trans. Amer. Ent. Soc. Vol. 27, p. 250 (1901).

82. Genus PŒCILOCHLORA, Warren

Pœcilochlora. Warren, Novit. Zool. Vol. 11, p. 505 (1904).

Characters. — Face smooth. Palpus with second joint moderate, rough-scaled, third joint slender, smooth, in ♂ moderate, in ♀ long. Tongue present. Antenna in ♂ bipectinate with short branches, apical part nearly simple; in ♀ nearly simple, shortly ciliated. Pectus somewhat hairy. Hind-tibia in ♂ dilated with hair-pencil, in both sexes with all spurs. Abdomen not crested. Frenulum in ♂ moderately developed, from before slight basal expansion, in ♀ rudimentary. Forewing with costa slightly arched, apex moderate, termen slightly concave anteriorly, elbowed at R^3, very oblique and subcrenulate posteriorly, cell less than one-half, DC^3 strongly incurved. SC^1 from cell, free or anastomosing with C, SC^2 normal, R^1 shortly stalked, M^1 connate or very shortly stalked; hindwing with termen prominent at R^1, bluntly toothed at R^3, excised between, nearly straight from R^3 to tornus, subcrenulate, tornus pronounced, cell short, DC^3 incurved, C rather shortly approximated to cell near base, SC^2 stalked, M^1 short-stalked.

Early stages unknown.

Again more distinct in shape and facies than in structural characters. The conditions of the frenulum might favour a rather less advanced position than we have here assigned it.

Type of the genus : *Poecilochlora minor*, Warren (1904).

Geographical distribution of species. — Peru to Colombia.

1. *P. minor*, Warren. — Peru
   Poecilochlora minor, Warren, Novit. Zool. Vol. 11, p. 506 (1904).
2. *P. heterograpta* (Warren). — Peru, Colombia.
   Neocrasis heterograpta, Warren, Novit. Zool. Vol. 11, p. 23 (1904).
   Poecilochlora heterograpta, Warren, ibidem, p. 506 (1904).

83. Genus HYALOCHLORA, nov. gen., Prout

Hyalochlora (Warren, MS.), **nov. gen.** Prout.

Characters. — Face smooth. Palpus in ♂ moderate, in ♀ long, second joint extending well beyond frons (especially in ♀), rough-scaled above and beneath, third joint smooth, in ♂ shortish.

in ♀ much elongated. Tongue developed. Antenna in ♂ bipectinate to nearly two-thirds, with rather short branches, in ♀ nearly simple. Pectus hairy. Hindtibia with all spurs developed, approximated; in ♂ dilated with strong hair-pencil and moderate terminal process. Abdomen not crested. Frenulum in ♂ from before slight basal expansion, in ♀ wanting. Wings hyaline, iridescent. Forewing with costa arched, apex moderate, termen rounded, waved, moderately oblique, cell short, less than two-fifths at discal spot, but greatly produced at apex and considerably at posterior angle. DC therefore extremely inbent (angled at discal spot), SC^1 free, SC^2 long-stalked, but arising before SC^5, R^1 connate or short-stalked, M^1 long stalked; hindwing with apex and termen rounded, termen weakly subcrenulate, tornus pronounced, cell short, DC^3 somewhat inbent anteriorly, oblique posteriorly, C appressed to cell to about one-half, then rapidly diverging, SC^2 long-stalked, R^2 from somewhat above middle, M^1 long-stalked.

Early stages unknown.

Evidently related to *Phrudocentra*, but distinct in the hyaline wings, subcrenulate termen of hindwing, extremely inbent DC of forewing and long stalking of M^1 of both wings.

Type of the genus : *Hyalochlora splendens* (Druce) = *Racheospila splendens*, Druce.

Geographical distribution of species. — Mexico to Colombia.

1. *H. splendens* (Druce). Mexico, Costa Rica, Colombia.
Racheospila splendens, Druce, Biol. Centr. Amer. Lep. Het. Vol. 2, p. 535, t. 90, f. 4 (1898).

84. Genus CHROTOCHLORA, Warren

Chrotochlora, Warren, Novit. Zool. Vol. 12, p. 317 (1905).

Characters. — Pectus hairy. Femora scarcely hairy. Hindtibia in ♂ with all spurs. Abdomen not crested. Frenulum slender, from before basal expansion. Forewing triangular, costa straight, somewhat arched distally, apex rather acute, termen entire, oblique, straight, tornus rather pronounced, cell less than one-half, DC^3 deeply incurved, SC^1 from cell, running into C, SC^2 short-stalked with SC^{3-5}, running close to C + SC^1, perhaps with contact at a point, R^1 connate, R^2 from above middle of DC, M^1 connate; hindwing with apex rounded, termen rounded, tornus squared, cell less than one-half, C approximated to cell to nearly one-half, rather gradually diverging, DC^3 incurved, SC^2 very shortly stalked, M^1 connate.

Early stages unknown.

We have given all the informations available on this genus, without being able to express any definite opinion on its status. It was founded on a single, headless specimen which, so for as we know, remains unique. The scaling, though smooth, is thick, and some points in the venation therefore remain uncertain.

Type of the genus : *Chrotochlora perpulchra*, Warren (1905).

Geographical distribution of species. — Peru.

1. *C. perpulchra*, Warren. Peru.
Chrotochlora perpulchra, Warren, Novit. Zool. Vol. 12, p. 317 (1905).

85. Genus DICHORDA, Warren

Dichorda. Warren, Novit. Zool. Vol. 7, p. 132 (1900)

Holothalassis. Gumppenberg, Nova Acta Acad. Leop. d. Naturf. Halle. Vol. 64, p. 510 (1895) (nec Hübner).

Characters. — Face smooth. Palpus moderate or longish, second joint strongly rough-scaled above and beneath (usually with long hair-scales beneath), terminal joint moderate, not slender, somewhat rough-scaled, partly concealed, slightly longer in ♀ than in ♂. Tongue present. Antenna moderate, in ♂ bipectinate with moderate branches, apex nearly simple, in ♀ serrate-dentate (shortly bipectinate in *phoenix*). Pectus strongly hairy. Femora hairy. Foretibia tufted. Hindtibia in ♂ not dilated, in both sexes rather rough-scaled, with four rather long, rather approximated spurs. Abdomen not crested. Frenulum in ♂ slender, from before basal expansion, in ♀ wanting. Forewing with costa slightly arched, apex acute, termen oblique, more strongly so posteriorly, faintly sinuate in anterior half, cell less than one-half, DC strongly incurved, SC^1 from cell, free, or anastomosing or connected at a point with C, SC^2 normal, R^1 just separate, M^1 separate; hindwing with apex and termen moderately rounded, tornus pronounced, cell short, DC^3 rather incurved, oblique posteriorly, C approximated to cell for a short distance, rather rapidly diverging, SC^2 stalked, M^1 approximated, occasionally almost connate.

Early stages unknown.

A small and compact genus, different in facies from *Phrudocentra*, and structurally in the more hairy legs and palpus, shorter and rougher third joint of the latter, etc.; in these characters recalling *Comibaena*. Hulst confuses it with *Anaplodes* (= *Nemoria*, part.), from which it is distinguished by the absence of ♀ frenulum, and by differences of leg-structure, etc.

Type of the genus : *Dichorda iridaria* (Guenée) = *Geometra iridaria*, Guenée (1900).

Geographical distribution of species. — United States to Amazons.

1. *D. iridaria* (Guenée). — Eastern U. S. A. to Guatemala.
   - *Geometra iridaria*, Guenée, Spec. Gén. Lép. Vol. 9, p. 344 (1858); Druce, Biol. Centr. Amer. Lep. Het. Vol. 2, t. 49, f. 5 (1892).
   - *Geometra remotaria*, Walker, List Lep. Ins. Brit. Mus. Vol. 22, p. 530 (1861).
   - *Geometra iridaria* var. *consequaria*, H. Edwards, Papilio, Vol. 4, p. 19 (1884).
   - *Holothalassis iridaria*, Gumppenberg, Nova Acta Acad. Leop. d. Naturf Halle, Vol. 64, p. 510 (1895).
   - *Anaplodes remotaria*, Hulst, Trans. Amer. Ent Soc. Vol. 23, p. 316 (1896).
   - ? *Anaplodes iridaria*, Hulst, ibidem, p. 316 (1896).
   - *Slossonia latipennis*, Hulst, The Canad. Entom. Vol. 30, p. 217 (1898) (teste Grossbeck, Ent. News, Vol. 20, p. 354).
   - *Dichorda iridaria*, Warren, Novit. Zool. Vol. 7, p. 132 (1900).
   - *Dichorda perpendiculata*, Warren, ibidem, Vol. 11, p. 503 (1904 (var.?).

2. *D. rectaria* (Grote). — Texas, Colorado.
   - *Geometra iridaria* part.), Packard, Mon. Geom. U. S. A. p. 394 (1876) (nec Guenée).
   - *Geometra rectaria* Grote, The Canad. Entom. Vol 9, p. 157 (1877).
   - ? *Anaplodes iridaria*, Hulst, Trans. Amer. Ent. Soc. Vol. 23, p. 316 (1896 (nec Guenée).

3. *D. iris* (Butler). — Amazons, Guatemala, West Indies.
   - *Nemoria iris*, Butler, Trans. Ent. Soc. Lond. p. 328 (1881); Druce, Biol. Centr. Amer. Lep. Het. Vol. 2, t. 49, f. 10 (1892).

4. *D. illustraria* (Hulst). California.
Geometra viridaria (part.), Packard, Mon. Geom. U. S. A. p. 394, t. 10, f. 93 (1876) (nec Guenée).
Geometra illustraria, Hulst, Ent. Amer. Vol. 2, p. 121 (1886).
Anaplodes illustraria, Hulst, Trans. Amer. Ent. Soc. Vol. 23, p. 316 (1896).

5. *D. uniformis*, Warren. Trinidad.
Dichorda uniformis, Warren, Novit. Zool. Vol. 16, p. 75 (1909).

6. *D. aplagaria*, Dyar. Mexico.
Dichorda aplagaria, Dyar, Proc. U. S. Nat. Mus. Vol. 38, p. 261 (1910).

7. **D. phœnix, nov. sp.** [1]), Prout (huj. gen.?). Arizona.

86. Genus LEPTOLOPHA, Warren

Leptolopha. Warren, Novit. Zool. Vol. 16, p. 78 (1909).

Characters. — Face smooth. Palpus in ♂ rather short, in ♀ rather long, second joint rough-scaled below, third joint smooth, in ♂ small, in ♀ elongate, slender. Tongue present. Antenna in ♂ bipectinate with moderate or long branches, apical one-third or less nearly simple, in ♀ nearly simple or strongly bipectinate. Pectus somewhat hairy. Hindtibia in both sexes with terminal spurs only. Abdomen with rather weak, soft, non-erect dorsal crests. Frenulum in ♂ slender, from before basal expansion, in ♀ wanting. Forewing with costa very slightly arched or almost straight, apex moderate, termen smooth, oblique, slightly curved, cell rather short, DC incurved, SC^1 free, SC^2 normal, R^1 stalked, M^1 connate or short-stalked; hindwing with termen little convex, tornus pronounced, cell short, DC^3 incurved, C approximated to nearly one-half cell, SC^2 stalked (very long-stalked in Section I), M^1 short-stalked.

Early stages unknown.

A small genus, almost certainly associated with the group of genera following, though with the dorsal crests much weaker (especially in Section II). There is some superficial resemblance to some of the more slenderly-built species of *Racheospila* (Section *Lissochlora*), with which Warren compares it; but the loss of the median spurs, and in Section II the pectinate ♀ antenna, show the greater advance in specialization.

Type of the genus: *Leptolopha flavilimes* (Warren) = *Lissochlora flavilimes*, Warren (1909).

Geographical distribution of species. — Peru, Brazil.

Section I. — Dorsal hair forming definite crests; cells quite short; ♀ antenna not bipectinate.

1. *L. flavilimes* (Warren). Peru to Upper Amazon.
Lissochlora flavilimes, Warren, Novit. Zool. Vol. 11, p. 21 (1904).
Leptolopha flavilimes, Warren, ibidem, Vol. 16, p. 78 (1909).
Leptolopha flavilimes ab. *decorata*, Warren, ibidem, p. 78 (1909).

1) **Dichorda (?) phœnix, nov. sp.** — ♀. 27 to 32 mm. Face crimson above, white marked with crimson below. Palpus crimson, somewhat mixed with white, base white beneath; terminal joint more slender than in the other species. Antenna bipectinate with short, slender branches, light, ochreous, shaft white dorsally. Vertex white, occiput green. Thorax green, somewhat mixed with white beneath. Abdomen white mixed with green, the dorsum wholly green basally, gradually giving place to more of the white colour. Forewing with termen somewhat less oblique than is typical in the genus, suggesting *Aplodes*; bright emerald green, costa narrowly crimson, interrupted with white; lines white, broad, antemedian from a slightly thickened spot at costa at nearly one-third, almost straight (insignificantly outbent in middle) to inner margin at beyond one-third; postmedian from costa at nearly three-fourths, parallel with termen (in the co-type very slightly curved basewards at costa); discal dot extremely minute (dark) or wholly obsolete, fringe green proximally, white distally. Hindwing with costa longer than in typical *Dichorda*, C approximated to cell to well beyond one-half; concolorous with forewing; only the costal area somewhat whiter; antemedian line wanting, postmedian nearly straight or very slightly curved, from costa nearly opposite postmedian of forewing to inner margin at or beyond three-fourths; discal dot and fringe as in forewing. Underside paler, similarly but more weakly marked. Phœnix, Arizona, 13 Sept. 1904 (R. E. Kunze). Type and co-type (both ♀) in coll. Brit. Mus. Scarcely a true *Dichorda*, according to the differences noted above; the non-oblique postmedian line of forewing also gives it a somewhat different aspect (more as *Aplodes*); but the frenulum is absent, the legs and palpi almost sufficiently hairy, and it can remain here for the present. In the type, SC^1 of forewing is free, in the co-type it anastomoses moderately with C.

2. *L. nigripunctata*, Warren. Peru.
Leptolopha nigripunctata, Warren, Novit. Zool. Vol. 16, p. 78 (1909).
3. *L. permagna*, Warren. Peru.
Leptolopha permagna, Warren, Novit. Zool. Vol. 16, p. 79 (1909).

SECTION II. — Dorsal hair forming a continuous ridge; cells less short; ♀ antenna strongly bipectinate.

4. *L. pallidaria* (Schaus). Brazil.
Comostola pallidaria, Schaus, Journ. New York Ent. Soc. Vol. 5, p. 161 (1897).

87. GENUS RACHEOLOPHA, WARREN

Racheolopha. Warren, Novit. Zool. Vol. 7, p. 137 (1900).

Characters. — Face smooth. Palpus in ♂ small, in ♀ with third joint long. Antenna in ♂ bipectinate, in ♀ perhaps variable (not pectinate in *rufilimes*). Frenulum in ♀ wanting. Hindtibia (at least in the ♀) with all spurs. Abdomen crested. Wings shaped as in *Racheospila*, Section II, etc. Forewing with SC^1 stalked to beyond R^1, sometimes running into C. Hindwing with C approximated to cell for some distance near base, not anastomosing.

Early stages unknown.

We have been quite unable to obtain access to a specimen of *miccularia*, Guenée, the type of this genus; it is entirely unknown to Dognin, Schaus and Dyar, and also to Warren at the present time. The above meagre notes have been drawn up from a hasty examination of *rufilimes*, and from one or two hints given by M. Oberthür, from Guenée's type. According to a rough figure, kindly sent us by M. Oberthür, it seems not unlikely that *rufilimes* should sink. The genus apparently differs from all the rest of its group in the four-spurred hindtibia.

Type of the genus : *Racheolopha miccularia* (Guenée) = *Racheospila miccularia*, Guenée (1900).

Geographical distribution of species. — French Guiana(?), Ecuador.

1. *R. miccularia* (Guenée). ? French Guiana.
Racheospila miccularia, Guenée, Spec. Gen. Lep. Vol. 9, p. 374 (1858).
Racheolopha miccularia Warren, Novit. Zool. Vol. 7, p. 137 (1900).
2. *R. rufilimes*, Warren (præc. syn.?). Ecuador.
Racheolopha rufilimes, Warren, Novit. Zool. Vol. 12, p. 310 (1905).

88. GENUS AUOPHYLLA, WARREN

Auophylla. Warren, Novit. Zool. Vol. 4, p. 423 (1897).

Characters. — Face smooth. Palpus in ♂ rather short, slender, second joint short-scaled, terminal joint small, pointed, in ♀ somewhat more elongate, yet still relatively small and slender. Tongue present. Antenna less than one-half, in both sexes strongly bipectinate, with apex nearly simple. Pectus hairy. Hindtibia in ♂ not dilated, in both sexes with terminal spurs only. Abdomen with compact, glossy crests. Frenulum in ♂ slender, from before basal expansion, retinaculum near base of forewing; ♀ frenulum wanting. Forewing with costa arched, apex acute, termen rather straight, cell nearly one-half, DC^3 inbent, SC^1 from cell, anastomosing with C or free, SC^2 normal, R^2 from much

above middle of DC, M^1 separate; hindwing with termen nearly smooth or waved, slightly bent at R^3, tornus pronounced, cell almost one-half, C approximated to cell to near one-half, then rapidly diverging, SC^2 stalked, M^1 nearly connate.

Early stages unknown.

This and the succeeding genera form a very natural group, the dorsal crests very uniform on the whole, median spurs of hindtibia always absent, ♀ antenna almost fixedly bipectinate (excepting a few *Oospila*).

Type of the genus : *Auophylla includaria* (Herrich-Schäffer) = *Thalera includaria*, Herrich-Schäffer (1897).

Geographical distribution of species. — Neotropical.

1. *A. includaria* (Herrich-Schäffer). Brazil.
   Thalera includaria, Herrich-Schaffer, Samml. Aussereur. Schmett. Vol. 1, t. 61, f. 341 (1855), p. 36, 62, 82 (1856).
   Phorodesma ? inclusaria, Guenée, Spec. Gén. Lep. Vol. 10, p. 371 (1858).
   Comibaena ? inclusaria, Walker, List Lep. Ins. Brit. Mus. Vol. 22, p. 57 (1861).
   Auophylla includaria, Warren, Novit. Zool. Vol. 4, p. 423 (1897).
2. *A. multiplagiata*, Warren. Paraguay, N. Argentina.
   Auophylla multiplagiata, Warren, Novit. Zool. Vol. 4, p. 424 (1897).
3. *A. magnifica* (Schaus). S. E. Brazil.
   Comibaena magnifica, Schaus, Trans. Amer. Ent. Soc. Vol. 27, p. 252 (1901).
4. *A. basiplaga*, Warren. Paraguay, N. Argentina.
   Auophylla basiplaga, Warren, Novit. Zool. Vol. 14, p. 291 (1907)[1].

89. Genus AUOPHYLLODES, nov. gen., Prout

Auophyllodes, nov. gen. Prout.

Characters. — Face smooth. Palpus in both sexes slender, with second joint short, third joint in ♂ rather small, pointed, in ♀ relatively long, smooth. Tongue present. Antenna in both sexes strongly bipectinate, the branches ceasing rather abruptly, apex nearly simple, ciliated. Pectus slightly hairy. Hindtibia in ♂ not dilated, in both sexes with terminal spurs only. Abdomen with compact, glossy crests (typically small; larger in *ecuadorata*, etc.). Frenulum in ♂ slender, from before well-marked basal expansion; in ♀ wanting. Forewing with costa gently arched, apex moderate or rather acute, termen smooth, oblique, slightly curved to nearly straight, cell rather short, DC little incurved, SC^1 stalked with SC^{2-5}, SC^2 typically arising after SC^5, R^1 often stalked, M^1 connate to long-stalked; hindwing with termen rounded, or very slightly bent at R^5, tornus rather pronounced, cell more or less short, DC not very oblique, sometimes angled at origin of R^2, C approximated to cell for some distance, SC^2 stalked, R^2 characteristic, M^1 shortly to long stalked (Pl. 3, Fig. 16).

Early stages unknown.

Typically very characteristic in the venation, but in order to avoid multiplying genera, we have included all the species in which SC^1 of forewing is stalked, even where SC^2 does not (as in the *venezuelata* group) arise after SC^5.

Type of the genus : *Auophyllodes venezuelata* (Walker) *Comibaena venezuelata* Walker.

Geographical distribution of species. — Central America to Brazil.

[1] *Aspilia basiplaga* on type label.

Section I. — Forewing with SC^2 arising after SC^5.

1. *A. venezuelata* (Walker). — Nicaragua to northern South America, Trinidad.
   Comibaena venezuelata, Walker, List Lep. Ins. Brit. Vol. 22, p. 570 (1861).
2. *A. ambusta* (Warren) (præc. ab.?). — Venezuela.
   Auophylla ambusta, Warren, Novit. Zool. Vol. 7, p. 131 (1900).
3. *A. invasata* (Walker). — Colombia, ? Guatemala.
   Comibaena invasata, Walker, List Lep. Ins. Brit. Mus. Vol. 35, p. 1611 (1866).
   ? *Comibaena invasata*, Druce, Biol. Centr. Amer. Lep. Het. Vol. 2, t. 49, f. 18 (1892) (spec. div.?).
   ? *Comibaena inclusaria*, Druce, ibidem, p. 88 (1892) (nec Herrich-Schaffer) (ead ac præc.).
   Auophylla invasata, ab. *perrupta*, Warren, Novit. Zool. Vol. 7, p. 132 (1900).
4. *A. belisama* (Druce). — Panama.
   Comibaena belisama, Druce, Biol. Centr. Amer. Lep. Het. Vol. 2, p. 87, t. 49, f. 16, 17 (1892).
5. **A. partita, nov. sp.** 1), Prout. — Panama, Costa Rica.

Section II. — Forewing with SC^2 arising before SC^5.

6. *A. sarptaria* (Möschler) (huj. gen.?) 2). — Surinam.
   Phorodesma scarptaria, Moschler, Verh. Zool.-bot. Ges. Wien, Vol. 31, p. 402, t. 17, f. 12 (1881).
   Comibaena sarptaria, Dognin, Le Naturaliste, Vol. 14, p. 186 (1892).
   Auophylla sarptaria, Warren, Novit. Zool. Vol. 7, p. 132 (1900).
7. *A. ecuadorata* (Dognin) (præc. syn.?). — **Pl. 4, Fig. 3.** — Ecuador to French Guiana and S. Brazil.
   Comibaena ecuadorata, Dognin, Le Naturaliste, Vol. 14, p. 186 (1892).
8. *A. arpata* (Schaus). — Brazil.
   Racheospila arpata, Schaus, Journ. New York Ent. Soc. Vol. 5, p. 161 (1897).
9. *A. delacruzi* (Dognin). — Ecuador.
   Comibaena delacruzi, Dognin, Ann. Soc. Ent. Belg. Vol. 42, p. 218 (1898).
   Oospila delacruzi, Warren, Novit. Zool. Vol. 11, p. 505 (1904).
   Racheolopha delacruzi, Warren, ibidem, Vol. 16, p. 86 (1909).
10. *A. similiplaga* (Warren) (huj. gen.?). — Brazil, Peru.
    Racheolopha similiplaga, Warren, Novit. Zool. Vol. 7, p. 137 (1900).
11. *A. extensata* (Warren). — French Guiana.
    Racheolopha extensata, Warren, Proc. U. S. Nat. Mus. Vol. 30, p. 423 (1906).
12. *A. astigma* (Warren). — Peru.
    Racheolopha astigma, Warren, Novit. Zool. Vol. 14, p. 206 (1907).
13. *A. fimbripedata* (Warren). — Peru.
    Racheolopha fimbripedata, Warren, Novit. Zool. Vol. 14, p. 207 (1907).
14. *A. leucostigma* (Warren). — Peru.
    Racheolopha leucostigma, Warren, Novit. Zool. Vol. 14, p. 207 (1907).
15. *A. lunicincta* (Warren) (huj. gen.?). — Paraguay.
    Racheolopha lunicincta, Warren, Novit. Zool. Vol. 16, p. 85 (1909).

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1) **Auophyllodes partita, nov. sp.** ♀, 28 mm. Shape of *invasata*. Head, antenna and palpus light ochreous, the latter redder above and on outer side; vertex with a slightly paler band behind the antennæ. Legs ochreous. Thorax green above. Abdomen very pale fleshy-ochreous, the dorsal crests very small, darker flesh-colour, glossy, confined to segments 2-4. Forewing with costa broadly pale ochreous, clouded with darker and spotted with reddish fuscous; basal area otherwise bright green nearly to middle of wing, its boundary somewhat oblique, and incurved below cell; outer area pale ochreous, irregularly marked with darker, enclosing a large blotch of bright green between SC^5 and M^1, with proximal edge projecting anteriorly nearly to DC^2, posteriorly receding somewhat, distal edge reaching to about 2,5 mm. from termen, except between R^1 and R^3, where the pale ochreous colour throws a curved projection basewards; terminal line fuscous, interrupted at the vein-ends; fringe ochreous. Hindwing green from SC (and SC^2 to origin of R^1) to near tornus (shape almost exactly as in *belisama*, Druce), terminal area coloured as in forewing, with ferruginous irroration more strong towards tornus, terminal line as in forewing, but more strongly interrupted, thickened into a conspicuous mark at tornus. Underside with pattern weakly showing through; forewing with a slightly curved fuscous bar from tornus to R^3; hindwing with a small subapical fuscous blotch. La Chorrera, Panama, 1 April to 15 May, 1898 (C. H. Dolby-Tylor). Type in coll. Brit. Mus. Costa Rica, in coll. W. Schaus. Structure quite typical.

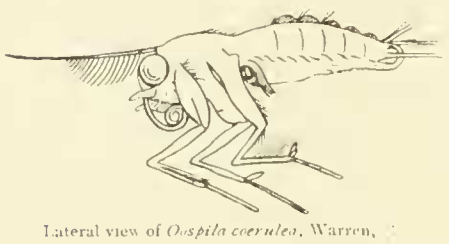
2) Moschler's figure and description (especially the « green abdomen ») do not fit perfectly with *ecuadorata*, and we therefore cite the name separately, and as of an unknown species, but it is quite likely that it is a form of Dognin's widely distributed and very variable species. The last-named certainly belongs to the present genus and section.

90. Genus OOSPILA, Warren

Oospila. Warren, Novit. Zool. Vol. 4, p. 426 (1897).
Drucia 1). Warren, ibidem, Vol. 7, p. 133 (1900).
Halioscia. Waren, ibidem, Vol. 14, p. 202 (1907) (indescr.).

Characters. — Face smooth. Palpus moderate to long, not long-scaled, third joint in ♂ small or moderate, in ♀ long to very long, smooth. Tongue present. Antenna rather short, in ♂ bipectinate with long branches, apical one-third nearly simple; in ♀ similarly bipectinate, or with more moderate branches, or lamellate, nearly simple. Pectus hairy. Femora usually somewhat hairy. Hindtibia in ♂ often clothed with extremely long hair on inner side, in both sexes with terminal spurs only. Abdomen with compact, glossy crests (Fig. 12). Frenulum in ♂ short, usually slender, from before well-marked basal expansion, retinaculum near base of forewing; ♀ frenulum wanting. Forewing with costa gently arched, apex moderate or rather acute, termen straight or gently rounded, moderately convex, cell less than one-half, DC usually rather straight. DC^3 occasionally strongly incurved, SC^1 from cell, free or anastomosing with C, SC^2 normal, R^1 shortly to rather long-stalked, perhaps occasionally connate, R^2 usually from well above middle of DC, M^1 usually short-stalked, occasionally connate or (quite exceptionally) separate, hindwing with termen variable in shape, either regularly rounded, slightly ventricose in middle, or more or less tailed at R^3 or at R^1 and R^3, tornus pronounced, cell short, DC^2 usually curved, DC^3 oblique, typically arising considerably distally, C appressed to SC to one-half cell or less, then rapidly diverging, SC^2 long-stalked, M^1 stalked.

Fig. 12



Lateral view of *Oospila coerulea*, Warren, ♂

Early stages unknown.

A rather large genus, showing some amount of structural variation, but not at all excessive. The shape of the hindwing cannot, so far as we can see, be utilized as generic: Warren places a few of the most strongly tailed forms as a separate genus, *Drucia*, but includes there forms in which the shape is very diverse, while he also admits into his other genera some which are more or less tailed (e. g., *Racheolopha heteromorpha*). The small group with non-pectinate ♀ antenna (*coerulea*, *devasa*, etc.) may possibly be tenable as a genus, but we have not even ventured to make it sectional, so many of the females being still unknown. Finally, it might be possible to split up the genus on the discocellulars of the hindwing; in the type-species and many others these are as described above, but in the *coerulea*-group and others they are almost straight (oblique), and in a few (e. g., *conversa*) DC^3 is strongly incurved. A very prevalent, though not invariable feature in the genus is the presence of an oval or roundish raised white cell-spot on DC^2 of the hindwing, often in addition to the ordinary cell-spot, which may be dark or white, and is placed about the middle of DC^3.

Type of the genus : *Oospila trilunaria* (Guenée) = *Racheospila trilunaria*, Guenée (1857).

Geographical distribution of species. — Neotropical.

1. *O. trilunaria* (Guenée). Brazil.
Phorodesma trilunaria, Guenée, Spec. Gén. Lep. Vol. 9, p. 372 (1858).
Combaena trilunaria, Walker, List Lep. Ins. Brit. Mus. Vol. 22, p. 570 (1861).
Oospila trilunaria, Warren, Novit. Zool. Vol. 4, p. 426 (1897).
Racheolopha trilunaria ab. *obsolescens*, Warren, ibidem, Vol. 10, p. 86 (1903).

1) Not preoccupied by *Drucea*, Kirby (1802).

2. *O. ciliaria* (Hübner). — Brazil.
Phalaena Geometra marginaria, Stoll, Suppl. Pap. Exot. Cramer, p. 156, t. 34, f. 8 (1790) (nec Fabricius, 1777).
Eucrostes ciliaria, Hübner, Verz. bek. Schmett. p. 283 (1826?).
Phalaena marginaria, Verloren, Cat. Ins. Lep. Crameri, p. 269 (1837).
Phorodesma (?) *semialbaria*, Guenée, Spec. Gén. Lép. Vol. 9, p. 372 (1858).
Comibaena (?) *marginaria*, Walker, List Lep. Ins. Brit. Mus. Vol. 22, p. 570 (1861).

3. *O. pallida* (Warren) (præc. var. vel syn.?). — French Guiana.
Racheolopha pallida, Warren, Proc. U. S. Nat. Mus. Vol. 30, p. 429 (1906).

4. *O. decoloraria* (Walker). — ? Jamaica, Paraguay.
Iodis decoloraria, Walker, List Lep. Ins. Brit. Mus. Vol. 22, p. 541 (1861).

5. *O. albicoma* (Felder). — Guatemala, Amazons, British Guiana.
Racheospila (?) *albicoma*, Felder, Reise Novara, Lep. Het. t. 127, f. 22 (1875).
Oospila albicoma, Warren, Novit. Zool. Vol. 7, p. 136 (1900).

6. *O. confundaria* (Möschler) (huj. gen.?). — Porto Rico, ? Dominica.
Racheospila confundaria, Möschler, Abh. Senckenb. Nat. Ges. Vol. 16, p. 242 (1890).

7. *O. callicula* (Druce). — Panama.
Comibaena callicula, Druce, Biol. Centr. Amer. Lep. Het. Vol. 2, p. 88, t. 49, f. 19 (1892).

8. *O. asmura* (Druce). — Panama, N. Peru.
Racheospila (?) *asmura*, Druce, Biol. Centr. Amer. Lep. Het. Vol. 2, p. 92, t. 50, f. 11 (1892).
Drucia asmura, Warren, Novit. Zool. Vol. 7, p. 133 (1900).

9. *O. hyalina*, Warren. — Colombia.
Oospila hyalina, Warren, Novit. Zool. Vol. 4, p. 427 (1897).

10. *O. marginata*, Warren (ead ac *confundaria*, Möschler ?). — British Guiana.
Oospila marginata, Warren, Novit. Zool. Vol. 4, p. 427 (1897).

11. *O. violacea*, Warren. — British Guiana.
Oospila violacea, Warren, Novit. Zool. Vol. 4, p. 427 (1897).

12. *O. jaspidata* (Warren). — British Guiana.
Racheospila jaspidata, Warren, Novit. Zool. Vol. 4, p. 430 (1897).
Racheolopha jaspidata, Warren, ibidem, Vol. 7, p. 137 (1900).
Drucia jaspidata, Warren, Proc. U. S. Nat. Mus. Vol. 30, p. 416 (1906).

13. *O. rosipara* (Warren). — Venezuela, ? Peru.
Racheospila rosipara, Warren, Novit. Zool. Vol. 4, p. 431 (1897).
Racheolopha flavicincta, Warren, ibidem, Vol. 7, p. 137 (1900) (nov. syn.).
? *Racheolopha microspila*, Warren, ibidem, Vol. 16, p. 86 (1909).

14. *O. delphinata* (Warren). — S. E. Brazil, Paraguay.
Drucia delphinata, Warren, Novit. Zool. Vol. 7, p. 133 (1900).

15. *O. concinna*, Warren. — Venezuela.
Oospila concinna, Warren, Novit. Zool. Vol. 7, p. 136 (1900).

16. *O. congener*, Warren. — British Guiana.
Oospila congener, Warren, Novit. Zool. Vol. 7, p. 136 (1900).
Halioscila congener, Warren, ibidem, Vol. 14, p. 203 (1907).

17. *O. ruptimacula*, Warren. — Ecuador.
Oospila ruptimacula, Warren, Novit. Zool. Vol. 8, p. 448 (1901).

18. *O. latimargo* (Warren). — Peru.
Drucia latimargo, Warren, Novit. Zool. Vol. 11, p. 20 (1904).

19. *O. atroviridis*, Warren. — Peru.
Oospila atroviridis, Warren, Novit. Zool. Vol. 11, p. 24 (1904).
Halioscia atroviridis, Warren, ibidem, Vol. 14, p. 202 (1907).

20. *O. restricta*, Warren. — Peru.
Oospila restricta, Warren, Novit. Zool. Vol. 11, p. 504 (1904).

21. *O. rufiplaga*, Warren. — Peru.
Oospila rufiplaga, Warren, Novit. Zool. Vol. 11, p. 505 (1904).

22. *O. depressa*, Warren. — Costa Rica, Panama.
Comibaena albicoma, Druce, Biol. Centr. Amer. Lep. Het. Vol. 2, p. 88 *(1892) (nec Felder).
Oospila depressa, Warren, Novit. Zool. Vol. 12, p. 45 (1905).

23. *O. thalassina*, Warren. — Peru.
Oospila thalassina, Warren, Novit. Zool. Vol. 12, p. 318 (1905).

24. *O. obeliscata* (Warren). — British and French Guiana.
Anophyla obeliscata, Warren, Proc. U. S. Nat. Mus. Vol. 30, p. 414 (1906).

25. *O. excrescens* (Warren). — French Guiana.
Drucia excrescens, Warren, Proc. U. S. Nat. Mus. Vol. 30, p. 415 (1906).

26. *O. quinquemaculata* (Warren). — French Guiana.
Drucia quinquemaculata, Warren, Proc. U. S. Nat. Mus. Vol. 30, p. 416 (1906).

27. *O. semispurcata* (Warren). — French Guiana.
Drucia semispurcata, Warren, Proc. U. S. Nat. Mus. Vol. 30, p. 416 (1906).

28. *O. sellifera*, Warren. — French Guiana.
Oospila sellifera, Warren, Proc. U. S. Nat. Mus. Vol. 30, p. 420 (1906).

29. *O. coerulea* (Warren). — British Guiana, Amazons.
Racheolopha coerulea, Warren, Proc. U. S. Nat. Mus. Vol. 30, p. 421 (1906).

30. *O. derasa* (Warren) (prae. ab.?). — French Guiana to Colombia.
Racheolopha derasa Warren, Proc. U. S. Nat. Mus. Vol. 30, p. 422 (1906).

31. *O. lilacina* (Warren). — French Guiana.
Racheolopha lilacina, Warren, Proc. U. S. Nat. Mus. Vol. 30, p. 424 (1906).

32. *O. longipalpis* (Warren). — French Guiana.
Racheolopha longipalpis, Warren, Proc. U. S. Nat. Mus. Vol. 30, p. 425 (1906).

33. *O. circumdata* (Warren). — Peru.
Drucia circumdata, Warren, Novit. Zool. Vol. 14, p. 202 (1907).

34. *O procellosa* (Warren). — Peru.
Halroscia procellosa, Warren, Novit. Zool. Vol. 14, p. 202 (1907).

35. *O. plurimaculata* (Warren). — Peru.
Racheolopha plurimaculata, Warren, Novit. Zool. Vol. 14, p. 208 (1907).

36. *O. conversa* (Dognin). — French Guiana.
Racheolopha conversa, Dognin, Ann. Soc. Ent. Belg. Vol. 52, p. 204 (1908).

37. *O. fractimacula*, nov. nom., Prout. — Peru.
Halroscia ruptimacula, Warren, Novit. Zool. Vol. 16, p. 77 (1909) nec *Oospila ruptimacula*, Warren, 1901.

38. *O. longiplaga*, Warren. — Upper Amazon.
Oospila longiplaga, Warren, Novit. Zool. Vol. 16, p. 83 (1909).

39. *O. minorata*, Warren. — Peru, Upper Amazon.
Oospila minorata, Warren, Novit. Zool. Vol. 16, p. 83 (1909).

40. *O. nasuta*, Warren. — Trinidad.
Oospila nasuta, Warren, Novit. Zool. Vol. 16, p. 83 (1909).

41. *O. semiviridis*, Warren. — Peru.
Oospila semiviridis, Warren, Novit. Zool. Vol. 16, p. 84 (1909).

42. *O. heteromorpha* (Warren). — Paraguay.
Racheolopha heteromorpha, Warren, Novit. Zool. Vol. 16, p. 84 (1909).

43. *O lactecincta* (Warren) (huj. gen.?). — Upper Amazon.
Racheolopha lactecincta, Warren, Novit. Zool. Vol. 16, p. 85 (1909).

44. *O. lacteguttata* (Warren). — Peru.
Racheolopha lacteguttata, Warren, Novit. Zool. Vol. 16, p. 85 (1909).

45. *O. fumidimargo* (Dognin). — Colombia.
Drucia fumidimargo, Dognin, Mem. Soc. Ent. Belg. Vol. 18, p. 162 (1911).

46. *O. dolens*, Druce. — Colombia.
Oospila dolens, Druce, Ann. Mag. Nat. Hist. (8), Vol. 7, p. 293 (1911).

47. **O. mesocraspeda, nov. sp.** [1]), Prout. — Panama.

1) **Oospila mesocraspeda, nov. sp.** — ♀, 27 mm. Face red. Palpus long (2 ½ times diameter of eye), red. Antenna bipectinate with moderate branches; shaft proximally white above, distally reddish, pectinations ochreous. Vertex whitish green, occiput green, the two colours narrowly separated by red. Thorax and abdomen green above, abdominal crests shining ruby red, those on segments 2-4 strong, those on 5-6 less so, traces of an additional crest on 7. Wings blue-green, nearly as in *coerulea* and *derasa*, hindwing with termen somewhat more strongly rounded than in those species. Forewing with costa narrowly ochreous, a small black discal spot and a purplish, fuscous-irrorated terminal band, quite narrow at costa and between R^3 and M^1, forming moderate, rounded margined projections from R^1 to R^3 and tornally; fringe paler, chequered with purplish. Hindwing with the raised oval white spot on DC^2, no second cell-spot; border nearly as on forewing, but with a third projection at apex, nearly coalesced with the middle one, the demarcation indicated only by a slight projection of the green ground-colour at R^1. Underside paler, the marginal bands largely obliterated, but leaving a terminal line on both wings, a fuscous tornal blotch on forewing and apical blotch on hindwing. La Chorrera, Panama, 1st April to 15th May, 1898 (C. H. Dolby Tylor). Type in coll. Brit. Mus. Aspect of the *coerulea*-group, but with pectinate antenna and DC^2 separately curved, as in typical *Oospila*, not continuously oblique with DC^1, as in *coerulea*. Perhaps nearer to *carneiumata* and *confluaria*, which are unknown to us.

48. **O. sesquiplaga, nov. sp.** 1). Prout. Brazil.

NOTE. — *Racheolopha carnelunata*, Warren, *Proc. U. S. Nat. Mus.* Vol. 30, p. 421; *R. confluaria*, Warren, ibidem, p. 422; *R. continuata*, Warren, ibidem, p. 422; *R. rubescens*, Warren, ibidem, p. 423; *R. florepicta*, Warren, ibidem, p. 424, and *R. sporadata*, Warren, ibidem, p. 429, are unknown to us, but are probably — some of them almost certainly — to be added to this genus. It is also possible that one or two of them belong to *Progonodes* or one of the other nearly allied genera; the description of *sporadata*, in particular, suggests the genus named.

91. GENUS PROGONODES, WARREN

Progonodes. Warren, Novit. Zool. Vol. 4, p. 429 (1897).

Characters. — Face smooth. Palpus in both sexes minute (shorter than diameter of eye), shortly scaled. Tongue present (not very strong). Antenna short, in both sexes bipectinate with long branches, apical end nearly simple. Pectus hairy. Hindtibia in both sexes with terminal spurs only. Abdomen with compact, glossy crests. Frenulum in ♂ short, from before basal expansion, in ♀ wanting. Wings usually rather smoothly and not densely scaled, hindwing sometimes with raised oval white spot on DC^2, as in *Oospila*. Forewing with costa rather straight proximally, more arched distally, apex prominent, termen oblique, straight anteriorly, slightly or more strongly curved posteriorly, cell nearly one-half, DC more or less normal (in *nivetacta* with DC^2 incurved and DC^3 arising distally), SC^1 from cell, anostomosing with C (free in *nivetacta*), SC^2 normal, R^1 connate or short-stalked, M^1 connate or short-stalked; hindwing with apex moderate or rather squared, termen slightly or strongly bent at R^3, thence rather straight, tornus pronounced, cell somewhat less than one-half, DC variable, C approximated to cell for some distance, SC^2 stalked, M^1 short-stalked, occasionally connate.

Early stages unknown.

We have retained this genus for a few species agreeing with *Oospila* in most characters, but distinguished by the minute palpus in both sexes.

Type of the genus : *Progonodes stagonata* (Felder) = *Racheospila stagonata*, Felder.

Geographical distribution of species. — Tropical America, ? S. Brazil.

1. *P. stagonata* (Felder). Colombia.
   Racheospila stagonata, Felder, Reise Novara, Lep. Het. t. 127, f. 25 (1875).
   Progonodes stagonata, Warren, Novit. Zool. Vol. 4, p. 430 (1897).
2. *P. arycanda* (Druce) (præc. var.?). Costa Rica.
   Racheospila arycanda, Druce, Biol. Centr. Amer. Lep. Het. Vol. 2, p. 89, t. 49, f. 21 (1892).
3. *P. athena* (Druce). Panama.
   Racheospila athena, Druce, Biol. Centr. Amer. Lep. Het. Vol. 2, p. 89, t. 49, f. 22 (1892).
4. *P. nivetacta* (Warren). — **Pl. 4, Fig. 7.** French and British Guiana.
   Racheolopha nivetacta, Warren, Proc. U. S. Nat. Mus. Vol. 30, p. 425 (1906).
5. *P. fenestrata*, Bastelberger. N. Peru.
   Progonodes fenestrata, Bastelberger, Intern. Ent. Zeit. Guben, Vol. 5, p. 54 (1911).
6. **P. semicaudata, nov. sp.** 2). Prout (huj. gen.?). Brazil.

1) **Oospila sesquiplaga, nov. sp.** — ♂, 32 mm. Shape, structure and coloration of *O. coerulea*, the markings of both wings fuscous purple, consisting on forewing of a minute discal dot, a thick terminal line, a small pyramidal blotch between R^1 and R^2 and a larger tornal blotch (from midway between M^1 and M^2 to inner margin at about 3 mm. from tornus, its edge rounded), on hindwing of the terminal line and a small tornal blotch; hindwing also with a raised white dash on DC^2; fringes purplish. Underside with the markings reduced to the terminal lines and, on forewing only, a *small* tornal blotch. Brazil, ex coll. Saunders, type in coll. Oxford Mus.

2) **Progonodes (?) semicaudata, nov. sp.** — ♀, 26 mm. Face red, vertex white, occiput green, palpus reddish, antennal shaft white. Thorax and base of abdomen green dorsally, paler beneath. Fore- and middle-legs tinged with red anteriorly. Forewing with costa arched, apex acute, termen straight (even faintly subconcave) anteriorly, strongly curved and oblique posteriorly; green, with a small red-brown cell-spot, large red-brown tornal blotch reaching to M^1, and rather thick red-brown terminal line, slightly pale-interrupted at the vein ends; fringe whitish, marked with red brown (defective). Hindwing somewhat quadrate, termen produced to a blunt tooth at R^3, faintly excised between R^1 and R^2; green, with a red-brown apical blotch reaching to R^1; discal spot, terminal line and fringe as in forewing, the terminal line thickened into a very small blotch at tornus. Espiritu Santo, Brazil. Type in Oxford Mus. Referred provisionally to *Pronogodes* in spite of smaller size and different facies. The crests are slight, concolorous with abdomen. M^1 of both wings is very shortly stalked, SC^2 of hindwing only shortly stalked, C is approximated to cell to about one-half and diverges gradually.

92. Genus RHOMBOCHLORA, Warren (præc. subgen.?)

Rhombochlora. Warren, Novit. Zool. Vol. 16, p. 89 (1909).

Characters. — Face smooth. Palpus in ♂ quite short (about as long as diameter of eye), rather slender, second joint shortly rough-scaled, terminal joint minute. Tongue present. Antenna scarcely over one half, in ♂ bipectinate to two-thirds with moderate branches, apex nearly simple, with single cilia. Pectus hairy. Femora glabrous. Hindtibia in ♂ dilated with hair-pencil, median spurs wanting. Abdomen with dorsal crests, somewhat as in *Oospila*, etc., but rather less highly developed. Frenulum as in ♂ moderate, from before appreciable basal expansion. Forewing with costa arched, apex moderate, termen very feebly elbowed at R^3, tornus pronounced, cell rather less than one-half, DC incurved, SC^1 free, SC^2 normal, R^1 short-stalked, R^2 from above middle of DC, M^1 approximated; hindwing with apex pronounced, termen strongly produced to a blunt tail at R^3, tornus pronounced, cell less than one-half, DC rather straight, oblique, C approximated to cell to near one-half, SC^2 stalked, M^1 connate.

Early stages unknown.

We have drawn up the above characterization from Warren's type, but have been quite unable to study it further or to compare it with the preceding; moreover the ♀ is unknown, and the status of the genus must remain for the present doubtful. Possibly not separable from *Progonodes*.

Type of the genus : *Rhombochlora granulata*, Warren (1909).

Geographical distribution of species. — Amazons.

1. *R. granulata*, Warren. Upper Amazon.
Rhombochlora granulata, Warren, Novit. Zool. Vol. 16, p. 89 (1909).

93. Genus LOPHOCHORISTA, Warren

Lophochorista. Warren, Novit. Zool. Vol. 11, p. 22 (1904).

Characters. — Face smooth. Palpus slender, second joint rather short, rough-scaled above and beneath, third joint in ♂ small, in ♀ greatly elongate. Tongue present. Antenna short, in both sexes bipectinate with long branches, apical one-third merely ciliated. Pectus densely hairy. Femora hairy, hindfemur (at least in ♂) densely long-haired. Hindtibia in ♂ greatly dilated, especially posteriorly, with dense masses of hair, one long and one short terminal spur, medians wanting (**Fig. 13**); in ♀ with a single pair of rather short, equal spurs. Hindtarsus in ♂ abbreviated. Metathorax strongly tufted. Abdomen with strong, moderately compact crests. Hindwing with appreciable basal expansion, frenulum in ♂ arising before it, moderately strong, in ♀ wanting. Wings smoothly scaled, somewhat hyaline. Forewing with costa straight proximally, slightly arched distally, apex moderate, termen faintly crenulate, curved, oblique, strongly so beyond M^1, cell almost one-half, DC^3 usually deeply incurved, SC^1 free, SC^2 normal, R^1 longish-stalked, R^2 from much above middle of DC, M^1 connate or separate; hindwing with apex rounded, termen crenulate, with stronger teeth at R^1 and R^3, especially the former, tornus moderately pronounced, cell less than one-half, DC^3 usually

Fig. 13

Hindleg of *Lophochorista ockendeni*, Druce, ♂.

deeply incurved, but very variable, C appressed to cell to one-half (the appression sometimes including a slight anastomosis), very rapidly diverging. SC^2 stalked, M^1 connate, stalked or approximated.

Early stages unknown.

Evidently related to *Oospila* (e. g., *O. obeliscata*), but distinct in the tufted metathorax, partly aborted ♂ hindleg, smooth, subhyaline scaling, crenulate hindwing, etc.

Type of the genus : *Lophochorista calliope* (Druce) = *Racheospila calliope*, Druce 1) (1904).

Geographical distribution of species. — Mexico to S. E. Brazil.

1. *L. calliope* (Druce). Mexico.
   Racheospila calliope, Druce, Biol. Centr. Amer. Lep. Het. Vol. 2, p. 90, t. 50, f. 1, 2 (1892).
   Lophochorista calliope, Warren, Novit. Zool. Vol. 11, p. 22 (1904).
2. *L. ockendeni* (Druce). Peru, Venezuela, S. E. Brazil.
   Racheospila ockendeni, Druce, Ann. Mag. Nat. Hist. (8.) Vol. 7, p. 293 (1911).

94. Genus CHEROSCELIS, nov. gen., Prout

Cheroscelis, nov. gen. Prout.

Characters. — Face smooth. Palpus long, slender, second joint shortly rough-scaled beneath, third joint smooth, elongate (especially in the ♀). Tongue present. Antenna less than one-half, in the ♂ bipectinate to about two-thirds, in ♀ shortly bipectinate (*palliata*), ciliate (*rubricorpus*) or almost simple (*oospila*). Pectus hairy. Femora slightly hairy. Hindtibia in both sexes with terminal spurs only 2). Abdomen crested, in ♀ robust. Frenulum arising from before some basal expansion, in ♂ moderate, in ♀ obsolescent. Forewing with costa slightly arched, more so towards apex, apex moderate, termen curved, oblique, waved, cell rather less than one-half, DC incurved, SC^1 usually free, occasionally anastomosing briefly with C, SC^2 normal, R^1 stalked (type, etc.) or separate, M^1 stalked (type) or separate; hindwing with termen convex, typically well-rounded, waved or subcrenulate (in *rubricorpus* somewhat elbowed at R^3 and straighter in tornal half), cell less than one-half, DC^3 somewhat incurved, C approximated to, or even slightly anastomosing with cell near base (in *palliata* point-anastomosing, then rapidly diverging), SC^2 stalked, R^2 normal, M^1 stalked.

Early stages unknown.

Evidently derived from a form akin to *Archichlora;* in some respects may be compared with *Comibaena*, *Spaniocentra*, etc. The species included are not very perfectly homogeneous, and unfortunately only one ♂ (*palliata*) is known; but there is no difficulty in including them in a single genus.

Type of the genus : *Cheroscelis oospila*, Prout.

Geographical distribution of species. — Ethiopian.

1) We assume that Warren drew up his diagnosis from the true *calliope*, which is unknown to us; but it is quite likely that the *calliope* of Warren was truly *ockendeni*, Druce, which has certainly been passing in collections under the name of *calliope*, and on which our own diagnosis is based. The two may possibly be geographical forms of a single species.

2) Unfortunately both hindlegs lost in the sole known example of the type species, but its relationship to *rubricorpus* is sufficiently close to justify our giving this character.

1. **C. oospila, nov. sp.** 1), Prout. — Upper Congo.
2. *C. palliata* (Warren). — Niger Coast.
   Rhomborista palliata, Warren, Novit. Zool. Vol. 5, p. 10 (1898).
   Rhomborista ustipennis, Warren, ibidem, p. 250 (1898).
3. *C. rubricorpus* (Warren). — Niger Coast, Kilima-njaro, Natal.
   Œnospila rubricorpus, Warren, Novit. Zool. Vol. 5, p. 235 (1898).
   Hemithea plagiata, Aurivillius, Schwed. Zool. Exped. Kilimanjaro (1), p. 89, t. 2, f. 10 (1910) (nov. syn.).

95. Genus HETEROCRITA, Warren

Heterocrita, Warren, Novit. Zool. Vol. 8, p. 445 (1901).

Characters 2). — Face smooth. Palpus with second joint rough-scaled above and beneath, in ♀ reaching well beyond frons, third joint in ♀ moderate, shortly rough-scaled 3). Tongue developed. Antenna in ♂ (?) 4), in ♀ nearly simple. Pectus hairy. Hindtibia with the spurs unequal, the outer median inclining to obsolescence. Abdomen sometimes with slight dorsal crests. Frenulum wanting or vestigial in ♀ (will certainly be present in the ♂). Forewing with costa slightly arched at base and towards apex, nearly straight between, apex rather acute, termen curved, oblique, faintly waved, cell not quite one-half, DC^3 curved, becoming very oblique, SC^1 from cell, anastomosing at a point or connected with C or free, SC^2 normal, sometimes anastomosing at a point with SC^1, R^1 connate or approximated, M^1 rather widely separate; hindwing with apex rounded, termen slightly toothed at the vein-ends, more strongly so at R^1 and R^3, with a slight or stronger excision between these latter, cell less than one-half, DC^3 somewhat incurved anteriorly, very oblique posteriorly, C approximated to cell to nearly or quite one-half, SC^2 stalked, M^1 rather widely separate.

Early stages unknown.

Type of the genus : *Heterocrita araria* (Guenée) = *Racheospila araria*, Guenée (1901).

Geographical distribution of species. — S. Africa, ? Madagascar.

1. *H. araria* (Guenée). — Namaqua Land.
   Racheospila araria, Guenée, Spec. Gen. Lep. Vol. 9, p. 373 (1858).
   Heterocrita araria, Warren, Novit. Zool. Vol. 8, p. 445 (1901).
2. *H. discerpta* (Walker) (huj. gen.?). — Cape.
   Geometra discerpta, Walker, List Lep. Ins. Brit. Mus. Vol. 22, p. 513 (1861).

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1) **Cheroscelis oospila, nov. sp.** — ♀, 35 mm. Head and face green, vertex broadly white between antennæ. Palpus marked with red above, whitish beneath. Antennal shaft basally white above, distally red. Thorax green. Fore- and middle-legs mostly red on outer side. Abdomen ventrally white, dorsally purple-brown at base, thence whitish densely speckled with purple-brown; crests strong, darker purple-brown with a slight metallic lustre. Wings bright green, slightly tinged with bluish. Forewing with costal edge narrowly whitish, tinged with fleshy ochreous; a very small pale discal spot, partly edged with red; two terminal blotches of fleshy ochreous, narrowly and vaguely margined with red, then more broadly with purple-fuscous, the anterior blotch reaching from SC^5 to near R^3, its proximal edge about 3,5 mm. from termen, the posterior blotch much larger, its proximal edge from inner margin at two-thirds, oblique basewards, then curved and sinuous, crossing R^4 at just beyond extremity of cell, thence oblique to termen at M^1, but with a subquadrate excision before reaching termen, both blotches slightly irrorated with reddish and fuscous, except proximally; terminal line thick, blackish, interrupted by the vein-ends, fringe pale ochreous with a chequering of reddish mixed with fuscous. Hindwing similar, the discal spot less edged with red, the blotches smaller, the tornal scarcely larger than the central, an additional elongate blotch along inner margin from near base, bounded by vein M as far as the origin of M^2, its boundary thence irregularly oblique to inner margin at about three-fifths, inner-marginal fringe continuing reddish. Under surface much paler, the same markings present, but shadowy, costa of forewing more ochreous. Upper Congo, 1907 (A. F. R. Wollaston). Type in coll. Brit. Mus. (in excellent condition). We have described the unique specimen very exactly, but probably the blotches will prove to vary, as in most of the allies. In any case, the scarcely ciliated antenna and the shape of the hindwing (rounded, almost crenulate) will distinguish it abundantly from *rubricorpus*.

2) Here again Warren has erected a genus on a little-known species of Guenée's, and our diagnosis, drawn up from *koranata*, may require modification, or the genus may have to be dropped. Guenée's type of *araria*, M. Oberthür writes us, is in such bad condition that he would advocate rejecting the name; he does not think it is identical with *koranata*, but there seems to be at least a near alliance.

3) If *discerpta* be really referable to this genus, the palpus must be variable, for in that species it has the terminal joint quite small and concealed in both sexes.

4) Warren says « thick, lamellate, with clavate teeth beneath »; they are pectinate in *discerpta*.

3. *H. koranata* (Felder). Cape to Transvaal.
Rahacospila (?) koranata, Felder, Reise Novara, Lep. Het. t. 127, f. 14 (1875).
4. *H. cinctuta* (Saalmüller) (huj. gen. ?). Madagascar.
Nemoria cinctuta, Saalmüller, Lep. Madag. (2), p. 495, t. 14, f. 279 (1891).

96. Genus CULPINIA, nov. gen., Prout

Culpinia, nov. gen. Prout.

Characters. — Face smooth. Palpus shortish-moderate, second joint rough-scaled, third joint in ♂ quite small, in ♀ slightly longer. Tongue present. Antenna in ♂ bipectinate almost to apex with moderate, in ♀ merely subserrate. Pectus hairy. Femora glabrous. Hindtibia in ♂ scarcely dilated, but with a small pencil of hairs, median spurs wanting; in ♀ with all spurs, the medians variable in development, sometimes apparently vestigial. Abdomen not appreciably crested. Frenulum present in ♂, sometimes rather well developed, often weak and colourless, always arising from before strong basal expansion; in ♀ wanting. Forewing with costa arched, apex rather acute, termen straight or even faintly incurved anteriorly, curved or bent in middle and becoming strongly oblique, cell less than one-half. DC^3 deeply incurved, becoming very oblique, SC^1 from cell (sometimes almost connate with SC^{2-5}), anastomosing with C or free, SC^2 normal, not approaching SC^1, R^1 connate or short-stalked, M^1 connate or short-stalked; hindwing with apex rounded, termen produced to a tooth at R^1 and a stronger one at R^3, excised between, tornus moderate, cell short, DC curved, C anastomosing with cell at a point or very shortly near base, then moderately rapidly diverging, SC^2 short-stalked, M^1 connate or usually stalked (**Pl. 3, Fig. 13**). ♂ genitalia : uncus pointed, with socii of equal length, gnathos pointed, almost atrophied, harpe rounded, sacculus considerably extended, with small scobinations, from the costa of harpe arise long clubbed scales; penis pestillate, narrow below, wider above, vesica with two short cornuli; related to *Thalera*, and apparently to *Microloxia*.

Early stages unknown.

Dedicated to Dr. M. Culpin, of Shanghai, to whom we are indebted for material in its type species, as well as other Eastern species. An interesting genus, on account of its singularly exact superficial likeness to the well-known *Thalera*, of which it must certainly be regarded as the parent. In this instance the structure has advanced without the slightest change of facies. In *Culpinia* the ♂ frenulum is present, sometimes even rather strong, the ♀ preserves (at least usually) the median spurs, while both frenulum and median spurs are entirely lacking in *Thalera*; *Thalera* has further specialized in the shortening of the palpus, the tendency to stronger anastomosis of C of hindwing with cell, and the pectination of the ♀ antenna; the other differences in venation, although among characters which are known to be variable, are by no means slight in the aggregate. The tibial armature would suggest a possible connection with the *Hemithea*-group.

Type of the genus : *Culpinia diffusa* (Walker) = *Thalera diffusa*, Walker.

Geographical distribution of species. — Eastern Palæarctic.

1. *C. diffusa* (Walker). Japan to Amur and China.
Thalera diffusa, Walker, List Lep. Ins. Brit. Mus. Vol. 22, p. 597 (1861).
Thalera crenulata, Butler, Ann. Mag. Nat. Hist. (5), Vol. 1, p. 399 (1878); Ill. Het. Coll. Brit. Mus. Vol. 3, p. 37, t. 50, f. 2 (1879).
Thalera rufolimbaria, Hedemann, Hor. Soc. Ent. Ross. Vol. 14, p. 512, t. 3, f. 5 (1879).

97. Genus CHLOROPARDA, nov. gen. Prout (hic ponendum?)

Chloroparda (Warren, MS.), **nov. gen.** Prout.

Characters. — Face smooth. Palpus minute, rough-scaled. Tongue very small and slender. Antenna in ♀ bipectinate. Hindtibia in ♀ with terminal spurs only. Abdomen not appreciably crested. Frenulum (in ♂?) in ♀ wanting, basal expansion of hindwing strong. Forewing with costa arched, apex acutely produced, termen concave to R^3, there produced, thence very strongly oblique, faintly sinuous, tornus obtuse, cell less than one-half, DC^3 deeply inbent, SC^1 from cell, anastomosing with C, SC^{2-5} stalked, SC^5 given off much before SC^2, SC^2 not approaching SC^1, R^1 well separate, R^2 from very near R^1, M^1 separate; hindwing with apex rounded, termen somewhat sinuous and produced to strong teeth at R^1 and R^3, deeply excised between, tornus moderate, cell short, DC^3 incurved, C touching cell near base, rather gradually diverging, SC^2 stalked, R^2 from very near R^1, M^1 separate.

Early stages unknown.

It is unfortunate to be compelled to found a genus upon a species of which we only have the ♀ before us, but the combination of characters marks it out as abundantly distinct. Should the ♂ frenulum prove to be absent, it must be transferred to the vicinity of *Thalera*, from which it differs widely in venation, but little otherwise. A similarity (perhaps more than superficial) to *Bathycolpodes* has induced us to place it here. Excepting *Lathochlora* — which likewise is known in the ♀ sex only — it seems to bear no really near relationship to any of the genera which share with it the peculiar subcostal venation. *Spaniocentra*, which has likewise lost the median spurs, has very different discocellulars and palpi, but the form of the wings in one or two of that genus and *Rhombocista* suggest that all three genera may belong to a common stirps.

Type of the genus : *Chloroparda palliplagiata* (Walker) *Thalassodes palliplagiata*, Walker.

Geographical distribution of species. — Burma.

1. *C. palliplagiata* (Walker). Burma.

Thalassodes palliplagiata, Walker, List Lep. Ins. Brit. Mus. Vol. 26 p. 1563 (1862).

Chlorodontopera palliplagiata, Hampson, Fauna Ind. Moths, Vol. 3, p. 483 (1895).

98. Genus BATHYCOLPODES, nov. gen., Prout

Bathycolpodes, nov. gen. Prout.

Characters. — Face smooth. Palpus in both sexes small, slender, second joint shortly rough-scaled, third joint minute. Tongue usually rudimentary. Antenna in both sexes ciliated, either simply or in more or less strongly pedicellate fascicles 1). Pectus somewhat hairy. Femora glabrous. Hindtibia in ♂ somewhat dilated with hair-pencil, no terminal process, in both sexes with all spurs. Abdomen crested, only the first crest usually strong. Frenulum in ♂ strong, but from before basal expansion, in ♀ vestigial. Forewing with costa arched, termen usually excised below apex, elbowed (usually strongly) at R^3, very oblique posteriorly, tornus not pronounced, cell less than one-half, DC^3 incurved, very oblique posteriorly, SC^1 from cell, free or anastomosing shortly with C, SC^2 normal, R^1 usually short-stalked, sometimes connate, R^2 from above middle of DC, M^1 stalked; hindwing with apex rounded, termen toothed (usually strongly) at R^1 and R^3, excised between, tornus moderately

1) Only in *anisotes* shortly bipectinate

pronounced, cell less than one-half, DC^3 oblique posteriorly, C approximated or point-anastomosing near base, usually rapidly diverging, R^2 very characteristic, M^1 stalked.

Early stages unknown.

Type of the genus : *Bathycolpodes marginata* (Walker) = *Episothalma marginata*, Warren.

Geographical distribution of species. — W. Africa.

1. *B. marginata* (Warren). Sierra Leone.
   Episothalma marginata, Warren, Novit. Zool. Vol. 4, p. 38 (1897).
2. *B. semigrisea* (Warren). — Pl. 4, Fig. 6. Congo, Ashanti.
   Episothalma semigrisea, Warren, Novit. Zool. Vol. 4, p. 38 (1897).
3. *B. excavata* (Warren). Nigeria, Ashanti.
   Episothalma excavata, Warren, Novit. Zool. Vol. 5, p. 234 (1898).
4. *B. subfuscata* (Warren). Nigeria.
   Episothalma subfuscata, Warren, Novit. Zool. Vol. 9, p. 494 (1902).
5. *B. kabaria* (Swinhoe). Sierra Leone.
   Episothalma kabaria, Swinhoe, Trans. Ent. Soc. Lond. p. 541 (1904).
6. **B. vegeta, nov. sp.** 1), Prout. S. Nigeria.
7. **B. acœlopa, nov. sp.** 2), Prout. S. Nigeria.
8. **B. anisotes, nov. sp.** 3), Prout. W. Africa.
   Episothalma subfuscata, Swinhoe, Trans. Ent. Soc. Lond. p. 542 (1904 indescr.; nec Warren).

99. Genus CHLORODREPANA, Warren

Chlorodrepana. Warren, Novit. Zool. Vol. 6, p. 22 (1898).

Characters. — Face smooth. Palpus minute. Tongue rudimentary. Antenna in both sexes simple, slightly pubescent. Pectus hairy. Femora glabrous. Hindtibia in ♂ somewhat dilated with

1) **Bathycolpodes vegeta, nov. sp.** — ♂. 24 mm. Face and palpus blackish, the latter rather longer than in most of the genus. Antenna red-brown proximally, blackish distally, the teeth quite slight, ciliation regular. Vertex red-brown, blackish posteriorly. Thorax green. Abdomen marked with green (discoloured). Forewing with termen crenulate, slightly excised between R^4 and R^5, gibbous at R^5 and M^1, then very oblique; rather dark blue-green, costa red-brown coarsely spotted with black, termen with red-brown, black-sprinkled and coarsely black-edged, crescentic markings, the first between apex and SC^5, the second between SC^5 and R^4, the third (larger) between R^4 and R^5, the last (a moderate-sized blotch at tornus) reaching to M^2; a very feebly indicated, diffuse darker green cell-spot; terminal line black; fringe brown, tinged with red and chequered with black at the vein-ends. Hindwing rather elongate, the teeth at R^4 and R^5 strong, the excision between deep; similar to forewing, but with the anterior two blotches larger, confluent, and the tornal one very small. Underside dirty pale green, the forewing somewhat clouded (except at margins) with greyish; cell-spots conspicuous, fuscous, terminal markings nearly as above, but paler, centred with the ground-colour instead of with reddish, their dark edges broad and diffuse. Ilesha, S. Nigeria (L. E. H. Humfrey). Type in coll. Brit. Mus. Nearest to *kabaria*, Swinhoe, the shape more extreme (intermediate towards *excavata*), the dark borders narrower, underside greenish not pink, etc.

2) **Bathycolpodes acœlopa, nov. sp.** — ♂. 22 mm. Face and palpus black, mixed with red. Vertex and antenna reddish ochreous, the pedicels of the fascicles of cilia elongate, forming slender, rudimentary pectinations. Occiput paler ochreous, margined anteriorly by a narrow black band on crown. Thorax and base of abdomen green dorsally, the rest of body, with legs, ochreous somewhat mixed with reddish; a deep brown-red lateral streak on second abdominal segment, slightly margined beneath with green. Forewing with termen not excavated in anterior half, merely very feebly sinuate; blue-green, costal margin from SC pale ochreous, becoming much redder costally, coarsely speckled with blackish; terminal one-third pale ochreous, clouded with darker, especially in its middle, and speckled with blackish, a blackish mark near costa and an elongate blackish blotch from tornus; the green area is bounded by a blackish line from costa at three-fourths to inner margin at two-thirds, dentate outwards on the veins (most weakly on R^3) and slightly incurved between radials and in submedian area; the space immediately following the line is narrowly whitish; no distinct terminal line; fringe ochreous. Hindwing with the tooth at R^4 and the excision rather slight; similar to forewing, but with the blackish line bounding the green area not dentate, but slightly incurved from apex at two thirds, then more strongly outcurved, approaching termen at M^2 and still more closely at tornus, slightly recurved between; the tornal blackish blotch very minute, an elongate one, on the other hand, running from apex to R^4; inner margin very narrowly ochreous nearly to base. Underside of forewing with basal two-thirds vaguely clouded with reddish except at inner margin, costal edge red, terminal area nearly as above, but with the fuscous blotch extended (though gradually narrowing and becoming slightly interrupted) from tornus to SC^4; of hindwing with the fuscous blotch from costa to beyond R^3. Ilesha, S. Nigeria (L. E. H. Humfrey). Type in coll. Brit. Mus.

3) **Bathycolpodes anisotes, nov. sp.** — ♀. 28 mm. Face dull red. Palpus dull red above, ochreous beneath. Tongue developed. Antenna with short, but true pectinations, bearing cilia. Head reddish, with a black band across crown. Thorax green above. Abdomen pale ochreous brown, the crests well developed, tinged with reddish. Forewing with termen very weakly crenulate, not excised below apex; rather dark bluish green; costa light ochreous, shaded with red, and coarsely speckled with blackish; distal margin for an average width of 2,5 mm. ochreous, centrally traversed by a red-brown shade, and irregularly speckled with blackish, the speckling sometimes concentrated close to tornus to form a vague blotch; proximal edge of this margin marked by a narrow white, proximally finely fuscous-edged line which is toothed outwards on SC^5 and R^4, incurved between radials and again posteriorly to M^1, toothed again on M^2 and SM^2; terminal dark spots between the veins; fringe ochreous. Hindwing with termen subcrenulate, the tooth at R^4 acute, but the excision following not very deep; coloured as forewing, the ochreous margin broadest in anterior half, and sometimes with a curved grey blotch from apex to R^3. Underside much paler and more uniform, but with the tornal blotch of forewing and apical of hindwing strong fuscous, the latter extended to beyond R^2. W. Africa (Bonny). Type in Oxford Museum, ex coll. Saunders. Old Calabar (S. D. Crompton). Co-type in coll. Brit. Mus. Nearly allied to the preceding species, but differing somewhat in shape and in the form of the terminal bands, and especially in the pectinate antenna.

hair-pencil, but without process, in both sexes with all spurs. Abdomen slightly or moderately crested. Frenulum in ♂ fairly strong, from before slight basal expansion, in ♀ vestigial. Forewing broad, with costa arched, apex falcate, termen little oblique, tornus pronounced, cell rather less than one-half, DC incurved, SC^1 from cell, free, SC^2 normal, R^1 just stalked, R^2 rather above middle, M^1 stalked; hindwing with termen bent at R^1, thence rather straight, waved, tornus pronounced, cell rather short, DC^3 slightly incurved, C anastomosing with cell at a point near base, thence moderately diverging, SC^2 stalked, R^2 very characteristic, M^1 stalked.

Early stages unknown.

Almost certainly a close relative of *Bathycolpodes*, in spite of the different shape; agrees practically in every other character.

Type of the genus: *Chlorodrepana rothi*, Warren (1896).

Geographical distribution of species. — W. Africa.

1. *C. rothi*, Warren. Niger Coast, Cameroons.
   Chlorodrepana rothi, Warren, Novit. Zool. Vol. 6, p. 22 (1899).
2. *C. angustimargo*, Warren. Sierra Leone.
   Chlorodrepana angustimargo, Warren, Novit. Zool. Vol. 8, p. 7 (1901).

100. Genus HYPOCŒLA, Warren

Hypocœla [1]), Warren, Novit. Zool. Vol. 4, p. 41 (1897).

Characters. — Face smooth, somewhat rounded. Palpus in ♂ rather short, second joint shortly scaled, third joint small; third joint in ♀ elongate. Tongue present. Antenna in both sexes bipectinate to two-thirds, in ♂ with moderate (in *humidaria* longish) branches, in ♀ with short branches. Pectus hairy. Hindtibia in ♂ not dilated, in both sexes with four rather approximated spurs. Abdomen usually somewhat crested. Frenulum in ♂ typically rather strong, but short (in some species more slender), arising from before basal expansion, in ♀ wanting or vestigial. Forewing with apex falcate, or with a small rounded excision between R^1 and R^3, cell less than one-half, produced apically, DC^3 deeply incurved, very oblique posteriorly, SC^1 free, or anastomosing briefly with C, SC^2 normal, R^1 connate, M^1 connate, approximated or very shortly stalked; hindwing with termen rounded, or with a small tail at R^3, inner margin long, cell less than one-half, DC oblique posteriorly, C anastomosing at a point, or appressed, continuing approximated for a little, then moderately divergent, SC^5 stalked (sometimes almost connate), M^1 stalked.

Early stages unknown.

We have extended this genus to include (at least provisionally) species of somewhat varying shape and facies, but tolerably uniform structure. They share with the two preceding genera a rather strong build, firm texture of wings, with thick but smooth scaling, the coloration generally a good deal variegated, and different on the two surfaces. The pectinate antenna (in both sexes, so far as known) distinguishes the present genus.

Type of the genus: *Hypocoela subfulva*, Warren (1897).

1) The generic name *Hypocoelus* has been three used in zoology, commencing with Eschscholtz (1830, *Coleoptera*), but the form *Hypocoela* is not preoccupied.

Geographical distribution of species. — Æthiopian.

1. *H. subfulva*, Warren. — **Pl. 4, Fig. 8.** Niger, Cameroons, Uganda.
   Hypocoela subfulva, Warren, Novit. Zool. Vol. 4, p. 41 (1897).
   Hypocoela uniformis, Warren, ibidem, Vol. 12, p. 385 (1905) (ab.?) nov. syn.)
2. *H. humidaria* (Swinhoe). Madagascar.
   Tanaorhinus humidaria, Swinhoe, Trans. Ent. Soc. Lond. p. 542 (1904).
3. *H. turpisaria* (Swinhoe). Nigeria.
   Thalera (?) turpisaria, Swinhoe, Trans. Ent. Soc. Lond. p. 546 (1904).
4. *H. semirufa* (Druce). Cameroons.
   Agatha (?) semirufa, Druce, Ann. Mag. Nat. Hist. (8), Vol. 7, p. 203 (1911).
5. **H. zapluta, nov. sp.** [1]), Prout. Uganda.

101. Genus ANTHARMOSTES, Warren

Antharmostes, Warren, Novit. Zool. Vol. 6, p. 21 (1899).

Characters. — Face smooth. Palpus moderate, second joint moderately rough-scaled above and beneath, third joint in ♂ small, in ♀ quite moderate, partly concealed. Tongue present. Antenna in ♂ bipectinate to beyond one-half with rather short branches, then becoming dentate-ciliate and finally simply ciliated; in ♀ nearly simple. Pectus moderately hairy. Femora glabrous. Hindtibia in ♂ dilated, with hair-pencil, in both sexes with four unequal spurs, only the inner median long. Hindtarsus in ♂ short. Abdomen usually slightly crested. Frenulum in ♂ moderately strong, from before slight basal expansion, retinaculum rather near base of forewing; ♀ frenulum wanting (in *papilio* apparently vestigial). Forewing with costa arched in distal half, apex acute, termen faintly waved, usually somewhat bent or elbowed in middle, cell less than one-half, DC curved, SC^1 free, SC^2 normal, R^1 very shortly stalked or separate, M^1 about connate; hindwing with termen faintly waved and with a tail at R^3, tornus pronounced, inner margin long, cell short, DC^3 inbent, C closely approximated to cell to near one-half, rapidly diverging, SC^2 stalked (exceptionally connate), M^1 stalked.

Early stages unknown.

The more normally-shaped form (*interalbicans*) comes very near to *Gelasma*, and is not easy to differentiate definitely therefrom on the characters at present used, the abdominal crests being inconstant and always very slight; yet it is a question whether the generic relationship is really close.

Type of the genus : *Antharmostes mesoleuca*, Warren (1899).

Geographical distribution of species. — Tropical Africa.

1. *A. mesoleuca*, Warren, Niger Coast.
   Antharmostes mesoleuca, Warren, Novit. Zool. Vol. 6, p. 21 (1899).

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1) **Hypocœla zapluta, nov. sp.** ♂, 20 mm. Palpus quite short (less than diameter of eye), tongue apparently more or less aborted. Antennal pectinations very short. Abdomen with small but distinct crests. Face blackish, mixed with reddish fuscous. Tip of palpus and outside of foreleg reddish fuscous, darker marked. Thorax above concolorous with forewing, abdomen above reddish fuscous, the crests darker. Forewing broad, apex produced but rounded, termen with rounded excision between SC^5 and R^3; olive-green, mixed, especially along veins, with reddish fuscous, the distal one-third, from R^1 to inner margin, more densely mixed with reddish fuscous, which here becomes the prevailing hue; some indistinct darker marks at the anterior proximal edge of this terminal shade. Hindwing elongate, termen slightly incurved from R^1 to R^3, where it is produced to a strong angle or tail; bright orange, more reddish towards base; terminal area broadly reddish fuscous from the tail to inner margin, broadening slightly at the latter; inner margin very narrowly olive-green to near base, somewhat marked with fuscous. Both wings beneath bright orange, forewing with a dark discal spot and a series of large dark interneural spots from costa to R^3 at 2,5 mm. from termen. Fringes dark grey. Entebbe, Uganda, 1905 (E. A. Minchin). Type in coll. Brit. Mus. Related to *turpisaria*, with which it agrees in shape; but differing in the aberrant palpus, sharper tail of hindwing and much brighter coloration; *semirufa* is probably a still closer relative, but with a broad dark marginal band beneath. In the forewing SC^1 anastomoses with C, R^1 is separate, in the hindwing SC^2 is connate, or barely stalked

2 *A. marginata* (Warren). Ashanti to Uganda.

Chlorostrota marginata, Warren, Novit. Zool. Vol. 4, p. 36 (1897) [1].

Antharmostes mesoleuca ab. *semimarginata*, Warren, ibidem, Vol. 6, p. 200 (1899) (ab. ?) (nov. syn.).

Antharmostes mesoleuca ab. *marginata*, Swinhoe, Trans. Ent. Soc. Lond. p. 586 (1904) (in err. pro *semimarginata*).

Antharmostes fuscimargo, Warren, Novit. Zool. Vol. 16, p. 112 (1909) (ab. ? nov. syn.).

Thalera violetta, Bastelberger, Ann. Soc. Ent. Belg. Vol. 53, p. 441 (1909) ab. ? (nov. syn.).

3. *A. interalbicans*, Warren. — **Pl. 4, Fig. 1.** Ashanti to Congo.

Antharmostes interalbicans, Warren, Novit. Zool. Vol. 9, p. 493 (1902).

4. **A. papilio, nov. sp.** [2]), Prout (vix huj. gen.?). German E. Africa.

102. Genus PERITHALERA, nov. gen., Prout

Perithalera, nov. gen. Prout.

Characters. — Face smooth. Palpus in ♂ rather short, in ♀ greatly elongate, second joint smooth-scaled, third joint in ♂ quite small, in ♀ extremely long. Tongue slight. Antenna in ♂ bipectinate with moderate branches, in ♀ dentate, ciliate. Hindtibia in ♂ greatly dilated, with strong hair-pencil, in both sexes with all spurs. Abdomen not crested. Frenulum in ♂ arising before basal expansion, in ♀ obsolete. Forewing with costa straight to near apex, then arched, apex squared, termen strongly ventricose, waved or subcrenulate, becoming very oblique, tornus moderate, cell less than one-half, DC incurved, very oblique posteriorly, SC^1 from cell, anastomosing strongly with C, SC^2 normal, anastomosing with SC^1, R^1 about connate, R^2 from above middle of DC, M^1 approximated to R^3; hindwing with apex weak, termen waved or subcrenulate, strongly ventricose, bent at R^1 and again at R^3, cell rather short, DC^3 incurved anteriorly, C appressed or anastomosing with SC at a point near base, then strongly diverging, SC^2 short-stalked, R^2 very characteristic, M^1 connate or short-stalked.

Early stages unknown.

The single species was placed by Warren in *Thalera*, but has little in common therewith excepting the marking of the fringes. Essential differences are the presence of frenulum and of median spurs, the long palpus and anastomosis of C of hindwing at a point only. Its actual affinities are uncertain.

Type of the genus : *Perithalera oblongata* (Warren) = *Thalera oblongata*, Warren.

Geographical distribution of species. — W. Africa.

1. *P. oblongata* (Warren).

Thalera oblongata, Warren, Novit. Zool. Vol. 5, p. [illegible] 1898.

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1) *Chlorostrota marginata* : on type label.

2) **Antharmostes (?) papilio, nov. sp.** — ♂, 40 mm. Nearly of the size, shape and structure of *marginata*, Warren, ♂, with termen of forewing somewhat more excised below apex, more sharply angled at R^3, ♂ with termen of forewing almost smooth; tail of hindwing well developed; ♂ antennal pectinations much longer than in the allies; palpus rather shorter (in both sexes only about as long as diameter of eye). Face dark red, mixed with white beneath; vertex and shaft of antenna brown-red, occiput green. Thorax green, paler beneath. Abdomen dorsally pale reddish, the small crests slightly deeper-coloured. Wings bright bluish green, with slightly darker green elongate discal marks, and with broad, pale brown-reddish borders, which are irregularly mottled and strigulated with darker brown-red and purplish; that on forewing about 5 mm. in width, limited anteriorly by R^3 excepting a small projection across that vein at some distance from termen, proximal edge formed by a dark line which bends towards termen between R^2 and M^1; that of hindwing slightly narrower, but reaching to costa, its proximal edge approaching termen between R^3 and M^1, thence somewhat dentate, and finally running very narrowly along inner margin almost to base; both wings with a fine dark terminal line, that of hindwing thickened and brightened with dark red between the veins and accompanied by a rather large dark spot at the base of the tail. Under surface much paler, forewing with a broad, cloudy purple-fuscous submarginal band from R^1 to tornus, hindwing with faint traces of the marginal band of upperside. Magila, German E. Africa, May 10th, 1898, type (♀) in coll. Brit. Mus.; Victoria Nyanza, ♂ (much worn, co-type in coll. Brit. Mus. In the ♀ example SC^2 of the hindwing is (probably exceptionally) connate instead of stalked.

103. Genus CHRYSOCHLOROMA, Warren

Chrysochloroma. Warren, Novit. Zool. Vol. 3, p. 288 (1896).

Characters. — Face smooth. Palpus in ♂ quite moderate, second joint densely scaled beneath, third joint in ♂ small, short-scaled, deflexed, in ♀ long. Tongue strong. Antenna in ♀ bipectinate with long branches, apical part nearly simple; in ♀ nearly simple. Pectus densely hairy. Femora hairy. Hindtibia in ♂ not dilated, terminal spurs unequal, medians rather approximated to the terminals, usually strongly unequal, the outer usually very small, sometimes wanting 1). Abdomen not crested. Frenulum in ♂ rather strong, but arising before a basal expansion; in ♀ vestigial, apparently sometimes wanting. Wings densely and opaquely scaled. Forewing broad, with costa very slightly arched (usually straight in middle), apex somewhat acute, at least in ♀, termen oblique, smooth, slightly curved (sometimes straight in anterior part), tornus rather pronounced, cell somewhat less than one-half, DC incurved, SC^1 usually free, bending twice, so as to approach successively C and SC^2, occasionally with brief anastomosis at the points of approach, SC^2 normal, R^1 stalked 2), R^2 from close to apex of cell, M^1 connate or approximated; hindwing subquadrate, apex moderately pronounced, termen subcrenulate or nearly smooth, angled at R^3, tornus pronounced, sometimes even slightly produced, inner margin long, cell short, DC straight or slightly curved, never extremely oblique, C approximated to cell for some distance, then rapidly diverging, SC^2 stalked, R^2 from close to R^1, M^1 stalked (**Pl. 3, Fig. 15**). ♂ genitalia : uncus pointed, with large socii; gnathos almost atrophied; harpe angulated; cucullus pointed; penis pestillate (*megaloptera*).

Early stages apparently undescribed. The larva of *C. megaloptera* have been found by Mr. F. P. Dodd, in North Queensland, in the nests of the green tree-ant.

This genus, though probably akin to *Gelasma*, differs quite sufficiently to require separation. Apart from the presence of a vestigial ♀ frenulum, and perhaps rather greater strength of that of the ♂, which suggests a position less advanced in the genealogical tree, there are several minor points of distinction, although the structural variations in *Gelasma* naturally bring about, now and then, a nearer approach to *Chrysochloroma* in one or another of them. The second joint of the palpus is stouter, densely scaled, but without separate *projecting* hair-scales; the third joint in the ♂ is more deflexed, in the ♀ it is quite long, while it is rarely even longish in *Gelasma;* SC^1 of the forewing is on the whole more bicurved; R^2 of both wings arises quite close to apex of cell; the scaling is always dense and opaque in *Chrysochloroma*, nearly always less so — often quite fine and iridescent — in *Gelasma;* the ♂ hindleg in *Gelasma* is usually dilated with hair-pencil, in *Chrysochloroma* this is not the case, but on the other hand there is a strong tendency to abortion of the outer median spur.

The resemblance of *Chrysochloroma* to *Ornithospila*, although it is superficially so considerable as to have misled Swinhoe (*Lep. Het. Oxford Mus.* Vol. 2, p. 403) into sinking *megaloptera* to *O. submonstrans* (!), is not at all close structurally.

Type of the genus : *Chrysochloroma meeki*, Warren (1896).

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1) There is certainly variability in this character, not only between different species, but within the limits of a single species; thus in *megaloptera* we have seen the spur almost entirely wanting or only somewhat shorter than the inner median; this is independent of sex.

2) Turner (*Proc. Linn. Soc. N. S. Wales*, Vol. 35, p. 610) says sometimes connate, and is too accurate an observer to be suspected of a mistake, but we think his observation probably refers to *orthodesma*, which we do not place in this genus; it is hard to believe that in true *Chrysochloroma*, with R^2 arising so near the apex of the cell, R^1 would be other than stalked, and we have certainly seen no exception. In *Gelasma eumixis*, which is a very close ally of *orthodesma*, we have observed R^1 sometimes connate.

Geographical distribution of species. — New Guinea (with islands) to N. Queensland.

1. *C. mecki*, Warren. — Trobriand Islands.
   Chrysochloroma mecki, Warren, Novit. Zool. Vol. 3, p. 288 (1896).
2. *C. megaloptera* (Lower). — Pl. 4, Fig. 2. — N. Queensland to Ke Island.
   Euchloris megaloptera, Lower, Trans. Roy. Soc. S. Austral. Vol. 18, p. 87 (1894).
   Chrysochloroma subalbida, Warren, Novit. Zool. Vol. 3, p. 364 (1896).
   Euchloris hypoleucus, Lower, Proc. Linn. Soc. N. S. Wales, Vol. 22, p. 263 (1897).
   Chrysochloroma megaloptera, Warren, Novit. Zool. Vol. 5, p. 422 (1898).
3. *C. electrica*, Warren. — British and Dutch New Guinea, Ron Island.
   Chrysochloroma electrica, Warren, Novit. Zool. Vol. 3, p. 303 (1896).
4. *C. rubritincta*, Warren. — British New Guinea, Wargeu.
   Chrysochloroma subalbida rubritincta, Warren, Novit. Zool. Vol. 3, p. 364 (1896).
   Ornithospila rubritincta, Swinhoe, Trans. Ent. Soc. Lond. p. 675 (1902).
5. *C. nubecula*, Warren. — Samba Island (British New Guinea).
   Chrysochloroma nubecula, Warren, Novit. Zool. Vol. 12, p. 421 (1905).

104. Genus GELASMA, Warren

Gelasma. Warren, Proc. Zool. Soc. Lond. p. 352 (1893).

Thalerura (Warren, Novit. Zool. Vol. 1, p. 392, indescr.), Swinhoe, Trans. Ent. Soc. Lond. p. 175 (1894).

Characters. — Face smooth, or slightly roughened below. Palpus moderate to longish (rather short in *convallata*, both sexes), second joint moderately rough scaled (usually with some projecting hair-scales above and beneath), third joint smooth, in ♂ more or less short, in ♀ shortish to moderate, very rarely long. Tongue present. Antenna moderate, in ♂ bipectinate, typically with long, coarse, long-ciliated pectinations, which diminish with great suddenness, apical one-third (less in *invidens* and perhaps a few others) nearly simple; in ♀ nearly simple, lamellate. Pectus slightly to moderately hairy. Femora usually glabrous. Hindtibia in ♂ usually dilated with hair-pencil, in both sexes with all spurs. Abdomen not crested. Frenulum in ♂ slender, but of good length, arising from before rounded basal expansion; in ♀ wanting. Wings usually smoothly scaled, not infrequently somewhat iridescent. Forewing with costa usually arched, apex acute, termen oblique, straight or slightly curved, cell less than one-half, DC incurved, SC^1 from cell, or occasionally connate or short-stalked, usually free, SC^2 normal, very rarely anastomosing at a point with SC^1, R^1 connate or short-stalked, R^2 from above middle of DC, M^1 approximated to R^3; hindwing with termen entire or weakly subcrenulate, angled or tailed at R^3, tornus pronounced, inner margin long, cell short, DC curved, becoming oblique, C approximated to cell for some distance (very rarely with slight anastomosis), then rapidly diverging, SC^2 stalked, R^2 characteristic, M^1 stalked (in *cowani* sometimes connate). ♂ genitalia: uncus pointed, with rounded socii; gnathos pointed, very slightly scobinated; harpe simple, with raised fold; vinculum with slight central projection at the base; penis pestillate; eighth sternite double lobed. Apparently related to *Prasinocyma*, *Iodis*, etc.

Early stages apparently unknown.

We have given, under the preceding genus, some notes on the differentiation of *Gelasma* therefrom. From *Prasinocyma*, to which it is still more closely related, it may generally be distinguished by the shape of the hindwing, that of *Prasinocyma* being very seldom at all definitely quadrate or elbowed, and oftenest perfectly rounded; the shorter third joint of the ♀ palpus (only at all elongate in a few

species, as *protrusa*, *inaptaria*, *submiculavia* and the *viridaurea*-group) offers usually a further distinction, as does also the nature of the ♂ antennal pectinations: but it must be admitted that the two genera are not always very sharply defined. *Thalerura*, with the tail of hindwing on the whole more pronounced, we have found quite untenable.

Type of the genus : *Gelasma thetydaria* (Guenée) = *Iodis thetydaria*, Guenée (1893).

Geographical distribution of species. — Indo-Malayan Region (straggling into the Eastern Palæarctic), Madagascar.

1. *G. thetydaria* (Guenée). — India, W. China, Philippines.
   Iodis thetydaria, Guenée, Spec. Gén. Lép. Vol. 9, p. 358 (1858).
   Thalassodes bifasciata, Walker, List Lep. Ins. Brit. Mus. Vol. 26, p. 1562 (1862).
   Thalera bifasciata, Moore, Proc. Zool. Soc. Lond. p. 637 (1867).
   Gelasma thetydaria, Warren, ibidem, p. 352 (1893).
2. *G. dissimulata* (Walker). — Borneo to N. India, Ceylon.
   Thalassodes dissimulata, Walker, List Lep. Ins. Brit. Mus. Vol. 22, p. 551 (1861).
   Thalerura marginata, Warren, Novit. Zool. Vol. 1, p. 392 (1894).
3. *G. illiturata* (Walker) (præc. var.?). — E. China, Japan.
   Thalassodes illiturata, Walker, List Lep. Ins. Brit. Mus. Vol. 26, p. 1563 (1862).
4. *G. acutissima* (Walker). — Ceylon.
   Thalera acutissima, Walker, List Lep. Ins. Brit. Mus. Vol. 22, p. 596 (1861).
   Thalassodes acutissima, Hampson, Fauna Ind. Moths, Vol. 3, p. 512 (1895).
5. *G. goniaria* (Felder) (præc. var.?). — India.
   Timandra goniaria, Felder, Reise Novara, Lep. Het. t. 128, f. 3 (1875).
   Thalera aculeata, Hampson, Ill. Het. Coll. Brit. Mus. Vol. 8, p. 109, t. 150, f. 5 (1891).
   Thalerura goniaria, Swinhoe, Trans. Ent. Soc. Lond. p. 175 (1894).
   Thalassodes acutissima (part.), Hampson, Fauna Ind. Moths, Vol. 3, p. 512 (1895) (nec Walker).
6. *G. veninotata* (Warren) (præc. var.?). — Assam.
   Thalerura veninotata, Warren, Novit. Zool. Vol. 1, p. 678 (1894).
7. *G. inaptaria* (Walker). — N. India.
   Thalassodes inaptaria, Walker, List Lep. Ins. Brit. Mus. Vol. 26, p. 1560 (1862).
   Thalassodes urapteraria, Walker, ibidem, Vol. 35, p. 1608 (1866).
   Thalerura urapteraria, Swinhoe, Trans. Ent. Soc. Lond. p. 175 (1894).
   Thalassodes inaptaria, Hampson, Fauna Ind. Moths, Vol. 3, p. 513 (1895).
   Thalerura inaptaria, Swinhoe, Lep. Het. Oxford Mus. Vol. 2, p. 403 (1900).
8. *G. glaucaria* (Walker). — N. India, Tibet.
   Thalera glaucaria, Walker, List Lep. Ins. Brit. Mus. Vol. 35, p. 1613 (1866).
   Thalassodes glaucaria, Butler, Ann. Mag. Nat. Hist. (5), Vol. 6, p. 215 (1880).
9. *G. ambigua* (Butler). — Japan.
   Thalassodes ambigua, Butler, Ill. Het. Coll. Brit. Mus. Vol. 2, p. 40, t. 36, f. 6 (1878).
   Thalera ambigua, Leech, Ann. Mag. Nat. Hist. (6), Vol. 20, p. 244 (1897).
10. *G. protrusa* (Butler). — Japan, Amur.
    Thalera protrusa, Butler, Ill. Het. Coll. Brit. Mus. Vol. 2, p. 50, t. 36, f. 10 (1878).
11. *G. cowani* (Butler). — Madagascar.
    Thalera cowani, Butler, Ann. Mag. Nat. Hist. (5), Vol. 5, p. 390 (1880).
    Gelasma cowani, Swinhoe, Trans. Ent. Soc. Lond. p. 545 (1904).
12. *G. centrophylla* (Meyrick). — E. and S. E. Australia.
    Iodis centrophylla, Meyrick, Proc. Linn. Soc. N. S. Wales (2), Vol. 2, p. 880 (1888).
    Iodis angulata, Lucas, ibidem, Vol. 3, p. 1264 (1888).
    Prasinocyma centrophylla, Turner, ibidem, Vol. 35, p. 590 (1910).

13. *G. patara* (Druce) (vix huj. gen.[1]). — Solomon Islands.
Thalassodes patara, Druce, Proc. Zool. Soc. Lond. p. 577 (1888).
Gelasma cynthia, var., Warren, Novit. Vol. 9, p. 353 (1902) (nov. syn.).

14. *G. cynthia*, Warren (prae. form.?). — Santa Anna (Solomons).
Gelasma cynthia, Warren, Novit. Zool. Vol. 6, p. 23 (1899) 21).

15. *G. grandificaria* (Graeser). — E. Siberia.
Nemoria grandificaria, Graeser, Berl. Ent. Zeitschr. Vol. 33, p. 266 (1890).
Thalera grandificaria, Staudinger, Iris, Vol. 10, p. 11, t. 1, f. 3 (1897).
Thalera colataria, Leech, Ann. Mag. Nat. Hist. (6), Vol. 20, p. 245 (1897) (nov. syn.).

16. *G. griseoviridis*, Warren. — N. India.
Gelasma griseoviridis, Warren, Proc. Zool. Soc. Lond. p. 353, t. 31, f. 6 (1893).
Thalassodes griseoviridis part.?, Hampson, Fauna Ind. Moths, Vol. 3, p. 509 (1895).

17. *G. orthodesma* (Lower). — N. Queensland, Fergusson Island, New Guinea.
Euchloris orthodesma, Lower, Trans. Roy. Soc. S. Austral. Vol. 18, p. 86 (1894).
Thalassodes albitusa, Warren, Novit. Zool. Vol. 3, p. 293 (1896) (nov. syn.).
Chysochloroma orthodesma, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 35, p. 612 (1910).

18. *G. eumixis* (Prout) (prae. form.?). — Pl. 4, Fig. 11. — Dutch and British New Guinea.
Thalassodes eumixis, Prout, The Entomologist Vol. 44, p. 27 (1911).

19. *G. prasina* (Warren). — Bhutan.
Thalerura prasina, Warren, Novit. Zool. Vol. 1, p. 302 (1894).

20. *G. albistrigata*, Warren. — Japan, China.
Gelasma albistrigata, Warren, Novit. Zool. Vol. 2, p. 80 (1895).
Hemithea flagellaria, Poujade, Ann. Soc. Ent. Fr. p. 310, t. 6, f. 8 (1895).
Hemithea flagellata, Poujade, ibidem, p. 315 (1895).
Thalassodes albistrigata, Leech, Ann. Mag. Nat. Hist. (6), Vol. 20, p. 242 (1897).
Gelasma flagellaria, Swinhoe, Trans. Ent. Soc. Lond. p. 674 (1902) 3).

21. *G. nigrifrons* (Hampson). — Ceylon.
Thalassodes nigrifrons, Hampson, Fauna Ind. Moths, Vol. 4, p. 506 (1896).

22. *G. convallata* (Warren) (huj. gen.?). — Khasis.
Megalochloa convallata, Warren, Novit. Zool. Vol. 3, p. 168 (1896).
Euchloris convallata, Hampson, Journ. Bomb. Nat. Hist. Soc. Vol. 12, p. 60 (1898).

23. *G. nemoriata* (Staudinger) (huj. gen.?). — Amur.
Phorodesma? nemoriata, Staudinger, Iris, Vol. 10, p. 9 (1897).
Euchloris? nemoriata, Staudinger, Cat. ed. 3, p. 263 (1901).

24. *G. submacularia* (Leech). — W. China.
Thalassodes submacularia, Leech, Ann. Mag. Nat. Hist. (6), Vol. 20, p. 242 (1897).

25. *G. fuscipuncta*, Warren. — Madagascar.
Gelasma fuscipuncta, Warren, Novit. Zool. Vol. 5, p. 13 (1898).

26. *G. sublustris*, Warren. — Ron Island.
Gelasma sublustris, Warren, Novit. Zool. Vol. 6, p. 24 (1899).

27. *G. unicolor*, Warren. — Flores.
Gelasma unicolor, Warren, Novit. Zool. Vol. 6, p. 24 (1899).

28. *G. viridaurea* (Warren) 4). — Ron Island, Dutch New Guinea.
Iodis viridaurea, Warren, Novit. Zool. Vol. 6, p. 25 (1899).

29. *G. ornatifimbria* (Warren) (huj. gen.?). — Isabel Island.
Chrysochloroma ornatifimbria, Warren, Novit. Zool. Vol. 10, p. 262 (1903).

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1) Palpus in both sexes long, antenna rather long (over two-thirds), the pectinations not characteristic, foretemur hairy, termen (especially of hindwing) subcrenulate, etc.

2) *Chrysochloroma cyntura* on type label.

3) Warren's name was published in June, Poujade's not until November, so that it is, we presume, by an oversight that Swinhoe has adopted the latter.

4) This species, *centrophyla*, *costipicta*, *bicolor*, *commixta* and probably *balteata*, seem to show in the slender (and often long) palpus, very slender frenulum and tendency to stalking of SC^1 with SC^{2+3} (at least in *viridaurea*) a near approach to *Iodis*, but the presence of the frenulum prevents our placing them there.

30. *G. costipicta* (Warren). — British New Guinea.
Iodis costipicta, Warren, Novit. Zool. Vol. 10, p. 358 (1903).
31. *G. imitans*, Warren. — British New Guinea.
Gelasma imitans, Warren, Novit. Zool. Vol. 13, p. 87 (1906).
32. *G. invidens*, Warren. — British New Guinea.
Gelasma invidens, Warren, Novit. Zool. Vol. 13, p. 88 (1906).
33. *G. spumata*, Warren. — British to Dutch New Guinea.
Gelasma spumata, Warren, Novit. Zool. Vol. 13, p. 88 (1906).
34. *G. bicolor* (Warren). — British New Guinea.
Iodis bicolor, Warren, Novit. Zool. Vol. 13, p. 88 (1906).
35. *G commixta* (Warren). — British New Guinea.
Iodis commixta, Warren, Novit. Zool. Vol. 13, p. 89 (1906).
36. *G caudipunctata*, Warren. — British New Guinea.
Gelasma caudipunctata, Warren, Novit. Zool. Vol. 14, p. 134 (1907).
37. *G. balteata* (Warren). — British New Guinea.
Thalassodes balteata, Warren, Novit. Zool. Vol. 14, p. 137 (1907).
38. *G. subangulata* (Warren) (huj. gen.?) — British New Guinea.
Thalerura subangulata, Warren, Novit. Zool. Vol. 14, p. 137 (1907).
39. *G. calaïna* (Turner) (huj. gen.?). — Queensland.
Prasinocyma calaïna, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 35, p. 600 (1910).
40. *G. fuscifimbria*, Prout. — **Pl. 4, Fig. 4.** — Khâsis.
Gelasma fuscifimbria, Prout, The Entomologist, Vol. 44, p. 28 (1911).
41. **G. melancholica, nov. sp.** 1), Prout. — Borneo, Singapore, ?Formosa.
42. **G. triplicifascia, nov. sp.** 2), Prout (huj. gen.?). — Madagascar.
43. **G. atrapophanes, nov. sp.** 3). — British New Guinea.

105. Genus MESURODES, Warren

Mesurodes. Warren, Novit. Zool. Vol. 2, p. 89 (1895).

Characters. — Face smooth. Palpus very small and slender, second joint scarcely rough-scaled, third joint smooth, distinct. Tongue developed. Antenna (in ♂ unknown) in ♀ lamellate, minutely ciliated. Pectus somewhat hairy. Femora scarcely hairy. Hindtibia with terminal spurs only. Abdomen

1) **Gelasma melancholica, nov. sp.** — ♂ ♀, 21-25 mm. Face dark dull red, mixed with olive scales. Palpus similar, but more fuscous, pale beneath; third joint in ♀ long. Antenna light yellowish brown, shaft shortly whitish at base. Vertex and occiput olive-green, the former very narrowly white anteriorly. Thorax above concolorous with wings; abdomen above somewhat paler; both beneath whitish. Wings broad, hindwing with termen slightly waved, right-angled at R^3. Colour dark greyish olive. Forewing with costal edge narrowly deep ochreous, spotted with fuscous; two indistinct lunulate-dentate whitish lines, at approximately one-third and two-thirds, the postmedian becoming thick and distinct near inner margin; a weakly indicated dark discal spot; fringe concolorous (sometimes more fuscous), preceded by an indistinct, slender pale terminal line, which sometimes expands into whitish spots at the vein ends. Hindwing similar, without the antemedian line. Underside of forewing pale olive, with costal edge as above; of hindwing whitish, sometimes unmarked, sometimes with a small darkened mark at apex; fringes fuscous. Sarawak (type, ♂) and Matang, Borneo; Singapore, all (two ♂, three ♀) in coll. Brit. Mus. Goping, Perak, a dark aberration (♂) in coll. Bastelberger. We have also seen a worn specimen from Formosa which is apparently referable to the same species.

2) **Gelasma (?) triplicifascia, nov. sp.** — ♂, 29 mm. Face orange-red, paler below. Palpus short, red, paler beneath. Antennal shaft whitish, pectinations yellowish. Vertex white, occiput yellowish. Thorax yellowish above, paler beneath. Abdomen apparently pale yellowish (discoloured). Wings white, forewing somewhat more yellowish from costa to SC. Both wings with three narrow, pale tawny bands: the first on forewing from below costa at two-thirds, oblique to above inner margin at scarcely beyond one-half, widening posteriorly but becoming rather ill-defined; on hindwing from about middle of costa almost straight towards anal angle, narrowing and joining second band before the angle; second band on both wings nearly parallel with termen, about 2,5 mm. distant therefrom; third band close to termen. A fine terminal line of the same colour as the bands. Fringes white, slightly mixed with tawny. Both wings with a minute black cell-spot at about two-fifths. Under surface white, unmarked, costa of forewing yellowish, deeper coloured to basal half. Ankafana, Betsileo, Madagascar (Rev. Deans Cowan). Type in coll. Brit. Mus. Generic position doubtful. The palpus is quite short, and the hindwing only very weakly elbowed at R^3, but too elongate for a *Chlorocoma*; moreover the pattern is much more that of *Gelasma*. Legs and antennæ broken, but otherwise the specimen is in good condition, though it is just possible that the substitution of yellowish colour for green may be due to the action of moisture. The venation is normal (SC^1 of forewing free).

3) **Gelasma atrapophanes, nov. sp.** — ♀, 38 mm. Closely similar to *eumixis*, Prout, differing as follows: termen of hindwing more weakly angled at R^3; forewing with basal green patch traversed near its distal edge by a very fine, direct, lunulate-dentate whitish line (this line in *eumixis* is sometimes absent, but when present it curves deeply basad along vein M); postmedian green band almost straight, parallel with termen, traversed close to its distal edge by a very fine, nearly straight, faintly denticulate whitish line, of which there is no trace in *eumixis*; hindwing with a similarly fine whitish line traversing the postmedian band close to its distal edge, nearly straight in its anterior part, but forming sharp angles on the veins from R^1 to inner margin, nearly as in *Thalassodes*; discal dot on both wings minute. Mount Kebea, British Central New Guinea, 6000 feet, March-April 1903 (A. E. Pratt). Type in coll. Brit. Mus.

not crested. Frenulum (in ♂ unknown) in ♀ apparently entirely wanting. hindwing with marked costal expansion. Forewing with costa arched, apex not acute, termen faintly subcrenulate, gently curved, rather oblique, cell almost one-half, DC^2 vertical, DC^3 deeply incurved, strongly oblique posteriorly, SC^1 from cell, anastomosing with C, SC^{2-5} normal, well away from SC^1, R^1 connate, R^2 from rather near R^1, M^1 approximated: hindwing quadrate, termen weakly subcrenulate, a small tail at R^3, tornus pronounced, with cell less than one-half, DC incurved, oblique posteriorly, C approximated to cell to near one-half, then moderately diverging, SC^2 short-stalked, R^2 from very near R^1, M^1 stalked.

Early stages unknown.

The ♂ being unknown, and the unique ♀ of course not available for dissection, it is not possible to state with absolute certainty that the genus belongs in this vicinity, but its entire aspect suggests that it is probably a much more specialized development of *Chrysochloroma*. The ♂ frenulum will almost certainly prove to be present. In any case the palpus, shape of wings, venation, etc., show that it has not the slightest connection with *Eucrostes*, with which Meyrick (working on the single character of the tibial armature) placed it, and we believe that Warren's genus *Mesurodes*, here provisionally adopted, will be found permanently necessary.

Type of the genus : *Mesurodes erichlora* (Meyrick) = *Eucrostis erichlora*, Meyrick (1895).

Geographical distribution of species. — Fiji.

1. *M. erichlora* (Meyrick). Fiji.

Eucrostis erichlora, Meyrick, Trans. Ent. Soc. Lond. p. 203 (1895).
Mesurodes erichlora, Warren, Novit. Zool. Vol. 2, p. 80 (1895).

106. Genus PENTHEOCHLORA, nov. gen., Prout

Pentheochlora (Warren, MS.). **nov. gen.** Prout.

Characters — Face smooth. Palpus in ♂ minute (shorter than diameter of eye), shortly rough-scaled (♀ unknown). Tongue slender. Antenna in ♂ bipectinate nearly to apex, with longish branches. Pectus moderately hairy. Femora somewhat hairy. Hindtibia in ♂ not dilated, with terminal spurs only. Abdomen not crested. Frenulum in ♂ present, arising before basal expansion. Forewing with costa somewhat arched, apex rather acute, termen straight, not very oblique, tornus pronounced, cell not shortened, DC incurved, strongly oblique posteriorly, SC^1 from cell, anastomosing with C, SC^2 normal, anastomosing with SC^1, R^1 very short-stalked, R^2 from above middle of cell, M^1 widely separate; hindwing subquadrate, with apex roundly squared, termen bent at R^3, otherwise straight, tornus pronounced, cell not shortened, DC markedly oblique posteriorly, C appressed to cell at a point near base, thence diverging moderately, SC^2 shortly stalked, M^1 remote from R^3.

Early stages unknown.

A quite distinct genus, though not of very striking appearance. It is more specialized than the genera which follow, but we have placed it here on account of the number of characters it shares with *Mesurodes*. It can easily be regarded as a derivative of *Gelasma*. From *Mesurodes* it differs in shape, in the shorter approximation of C of hindwing to the cell and in the wide separation of M^1 of both wings. The few other genera in our Group V with minute palpus and two spurs (*Neromia*, *Pseudhemithea*, *Prosomphax*, *Prognodes*) differ essentially from *Pentheochlora* in antennal structure, abdominal crests, stalking of M^1 of hindwing or other characters.

Type of the genus : *Pentheochlora uniformis* (Hampson) = *Thalera uniformis*, Hampson.

Geographical distribution of species. — India.

1. *P. uniformis* (Hampson). Nilgiris.

Thalera uniformis Hampson, Ill. Het. Coll. Brit. Mus. Vol. 8. p. [illegible], t. 150. f. 11 (1901).

Thalassodes uniformis, Hampson, Fauna Ind. Moths, Vol. 3. p. 513 (1895).

107. Genus THALASSODES, Guenée

Thalassodes, Guenée, Spec. Gén. Lép. Vol. 9. p. 359 (1858); Moore, Lep. Ceyl. Vol. 3. p. 426 (1887).

Characters. — Face smooth. Palpus in ♂ moderate to longish, in ♀ more or less long, second joint rough-scaled above and (rather shortly) beneath, third joint smooth, distinct, in ♂ moderate to longish, in ♀ long. Tongue present. Antenna more than one-half, in ♂ bipectinate to beyond one-half, the pectinations long, weak, usually erected very little from the plane of the shaft, clothed with long, dense cilia, a long apical portion nearly simple, shortly ciliated; in ♀ nearly simple, shortly ciliated. Pectus hairy. Femora glabrous (excepting the hindfemur in the males with specialized hindleg). Hindtibia in ♂ dilated with hair-pencil and usually a short terminal process, or simple, in both sexes with all spurs. Abdomen not crested. Frenulum in ♂ moderate, rather short, from before basal expansion, in ♀ wanting. Forewing broad, with costa arched distally, and usually somewhat shouldered at base, straight between, apex acute, termen moderately oblique, slightly curved or nearly straight, tornus pronounced, cell about two-fifths. DC^3 incurved, SC^1 free, SC^2 normal, R^1 short-stalked, M^1 connate or short-stalked; hindwing subquadrate, apex moderate, termen smooth, rather straight to R^3, there elbowed to bluntly toothed, thence straight to tornus, tornus pronounced, inner margin long, cell short to very short, DC strongly and continuously oblique (DC^3 at times somewhat sinuous), C appressed (perhaps sometimes with brief anastomosis) to one-half of the short anterior margin of cell, then rapidly diverging, SC^2 stalked, M^1 stalked (Pl. 3, Fig. 11). ♂ genitalia with uncus pointed or rounded, socii always present, usually strong, gnathos usually weak or atrophied, harpe usually narrowed above and often with hook or hooks on inner margin (modification of juxta), vinculum rounded or extended, penis pestillate, coremata present (at least usually). (Several species examined.)

Larva. — Slender, head bifid, a pointed protuberance on eighth abdominal segment. According to the figures, would appear to be similar to that of *Iodis* (Moore, *Lep. Ceyl.* Vol. 3. p. 426; Semper, *Reisen Philipp.* (2), Vol. 6. p. 641; Guenée, Maillard's *La Réunion*, annexe G. p. 32).

Pupa. — Scarcely described: in *dissita* pinkish, greenish in front, thorax and abdomen black-speckled (Moore, loc. cit.).

As restricted by Turner, whom we have followed, an exceedingly natural genus. The character which Turner gives (first noted by Guenée himself) — the extreme obliquity of DC of the hindwing — is very constant throughout the forms which are quite clearly congeneric. Its adoption has necessitated the removal to *Prasinocyma* of a few African forms which seem rather nearly related, but as they have more normal pectinations, and moreover grade off insensibly into forms with perfectly rounded termen of hindwing, their removal is at least a convenience taxonomically. The species left are superficially extremely closely allied: the distinctions of leg-structure, though very useful in separating the species, are quite certainly not generic. Unfortunately the determination of two of Guenée's species (*quadraria* and *veraria*) is entirely lost, and he did not even know their localities. As he possessed the ♂ of both, and gives in his generic diagnosis "les tibias postérieurs non renflés", we doubt Turner's determinations. A species which may well be Guenée's *quadraria* occurs from N. India to Burma.

Type of the genus : *Thalassodes filaria*, Guenee (1857).

Geographical distribution of species. — Indo-Australian, straggling into Æthiopian Region.

1. *T. pilaria*, Guenée. — Tahiti.
   Thalassodes pilaria, Guenée, Spec. Gén. Lép. Vol. 9, p. 361, t. 15, f. 2 (1858).
2. *T. quadraria*, Guenée. — ?Central India to Burma, ?Australia.
   Thalassodes quadraria, Guenée, Spec. Gén. Lép. Vol. 9, p. 360 (1858).
3. *T. hyraria*, Guenée. — Réunion.
   Thalassodes hyraria, Guenée, Spec. Gén. Lep. Vol. 9, p. 360 (1858).
4. *T. veraria*, Guenée. — ?Australia.
   Thalassodes veraria, Guenée, Spec. Gén. Lép. Vol. 9, p. 360 (1858).
5. *T. digressa* (Walker). — S. E. to E. Africa, ? West Africa.
   Geometra digressa, Walker, List Lep. Ins. Brit. Mus. Vol. 22, p. 513 (1861).
   Thalassodes ricinaria, Guenée, Maillard's La Réunion, Annexe G, p. 32 (1862) (nov. syn.).
   Thalassodes subreticulata, Mabille, Ann. Soc. Ent. Fr. Vol. 68, p. 740 (1900) nov. syn., teste Warren in litt.
   Hemithea sapolaria, Swinhoe, Trans. Ent. Soc. Lond. p. 547 (1904) (nov. syn.).
6. *T. dissita* (Walker). — India with Ceylon, ?Borneo, ?Philippines.
   Geometra dissita, Walker, List Lep. Ins. Brit. Mus. Vol. 22, p. 519 (1861).
   ? *Thalassodes dissepta*, Walker, ibidem, p. 550 (1861).
   Thalassodes dissita, Moore, Proc. Zool. Soc. Lond. p. 637 (1867); Lep. Ceyl. Vol. 3, p. 426, t. 194, f. 2, 2a (1887).
7. *T. semihyalina* (Walker). — Borneo, Celebes.
   Geometra semihyalina, Walker, List Lep. Ins. Brit. Mus. Vol. 22, p. 528 (1861).
   Thalassodes viridicaput, Warren, Novit. Zool. Vol. 4, p. 391 (1897) (nov. syn.).
   Thalassodes dissita (part.), Swinhoe, Lep. Het. Oxford Mus. Vol. 2, p. 400 (1900) (nec Walker) 1).
8. *T. depulsata*, Walker. — Malaysia with New Guinea, ? N. W. India (var.?), ? Ceylon.
   Thalassodes depulsata, ♂, Walker, List Lep. Ins. Brit. Mus. Vol. 22, p. 555 (1861) (nec ♀).
   ? *Thalassodes immissaria*, Walker, ibidem, p. 553 (1861) (nom. dubium).
9. *T. inconclusaria*, Walker. — Loc. ignot.
   Thalassodes inconclusaria, Walker, List Lep. Ins. Brit. Mus. Vol. 22, p. 556 (1861) 2).
10. *T. opalina*, Butler. — N. India.
   Thalassodes opalina, Butler, Ann. Mag. Nat. Hist. (5), Vol. 6, p. 214 (1880); Ill. Het. Coll. Brit. Mus. Vol. 6, p. 214, t. 117, f. 9 (1886).
   Euchloris opalina, Swinhoe, Trans. Ent. Soc. Lond. p. 175 (1894).
11. *T. rhytiphorus* (Lower) (præc. var. vel syn.?). — N. Australia, New Guinea.
   Iodis rhytiphorus, Lower, Trans. Roy. Soc. S. Austral. Vol. 17, p. 156 (1893).
   Thalassodes veraria, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 35, p. 595 (1910) (vix Guenée).
12. *T. saturata*, Snellen. — Celebes.
   Thalassodes saturata, Snellen, Tijdschr. v. Ent. Vol. 24, p. 77, t. 8, f. 3 (1881).
13. *T. chloropis*, Meyrick. — Fiji.
   Thalassodes chloropis, Meyrick, Trans. Ent. Soc. Lond. p. 204 (1886).
   ? *Thalassodes opalina*, Druce, Proc. Zool. Soc. Lond. p. 227 (1888) (nec Butler).
14. *T. byrsopis*, Meyrick. — New Guinea to Queensland.
   Thalassodes byrsopis, Meyrick, Proc. Linn. Soc. N. S. Wales (2), Vol. 1, p. 249 (1886).
   Iodis byrsopis, Meyrick, ibidem, Vol. 2, p. 898 (1888).
   Iodis implicata, Lucas, ibidem, Vol. 6, p. 293 (1891) (teste Turner).
   Thalassodes quadraria, Turner, ibidem, Vol. 35, p. 594 (1910) (nec Guenée).
15. *T. leucospilota*, Moore. — Ceylon.
   Thalassodes leucospilota, Moore, Lep. Ceyl. Vol. 3, p. 427, t. 194, f. 4 (1887).
   Thalera albomaculata, Hampson, Ill. Het. Coll. Brit. Mus. Vol. 9, p. 145, t. 170, f. 39 (1893).
16. *T. timoclea*, Druce. — Fiji.
   Thalassodes timoclea, Druce, Proc. Zool. Soc. Lond. p. 227, t. 13, f. 6, 7 (1888).
17. *T. opaca*, Warren (huj. gen.?). — Niger Coast.
   Thalassodes opaca, Warren, Novit. Zool. Vol. 5, p. 17 (1898).

1) Walker's *dissita* has the hindwing normally shaped and the ♂ hindtibia dilated; his type of *semihyalina* has the angle at R^3 exceptionally weak, and the ♀ hindtibia simple. We believe the identification of *viridicaput*, Warren, to be safe, although we have not had an opportunity to compare the types side by side.

2) Type extant, in bad condition, not at present determinable.

18. *T. gigas*, Warren. — Solomon Islands.
Thalassodes gigas, Warren, Novit. Zool. Vol. 6, p. 27 (1899).

19. *T. ostracites* (Karsch) (huj. gen. ?). — Madagascar.
Thalera ostracites, Karsch, Ent. Nachr. Vol. 26, p. 370 (1900).

20. *T. unicolor*, Warren. — Niger.
Thalassodes unicolor, Warren, Novit. Zool. Vol. 9, p. 497 (1902).

21. *T. curiosa*, Swinhoe. — Penang.
Thalassodes curiosa, Trans. Ent. Soc. Lond. p. 673 (1902).

22. *T. dorsilinea*, Warren. — New Guinea, Solomons, N. Queensland.
Thalassodes dorsilinea, Warren, Novit. Zool. Vol. 10, p. 364 (1903).

23. *T. dorsipunctata*, Warren — New Guinea.
Thalassodes dorsipunctata, Warren, Novit. Zool. Vol. 10, p. 364 (1903).
Thalassodes dorsipunctata ab. *minor*, Warren, ibidem, p. 364 (1903) (ab.).

24. *T. nivestrota*, Warren. — British and Dutch New Guinea.
Thalassodes nivestrota, Warren, Novit. Zool. Vol. 10, p. 365 (1903).
Thalassodes nivestrata, Rothschild, ibidem, Vol. 11, t. 3, f. 36 (1904).

25. *T. umbrimedia*, Warren. — British New Guinea.
Thalassodes umbrimedia, Warren, Novit. Zool. Vol. 10, p. 365 (1903).

26. *T. subviridis*, Warren. — Christmas Island.
Thalassodes subviridis, Warren, Novit. Zool. Vol. 12, p. 10 (1905).

27. *T. zebrata*, Warren. — British New Guinea.
Thalassodes zebrata, Warren, Novit. Zool. Vol. 13, p. 90 (1906).

28. *T. viridifascia*, Swinhoe. — Borneo.
Thalassodes viridifascia, Swinhoe, Ann. Mag. Nat. Hist. (8), Vol. 1, p. 66 (1908).

29. *T. interalbata*, Prout. — Dutch New Guinea.
Thassalodes interalbata, Prout, The Entomologist, Vol. 44, p. 27 (1911).

30. **T. hypocrites, nov. sp.** 1), Prout. — India, Singapore.

31. **T. aucta, nov. sp.** 2), Prout. — N. India.

32. **T. dentatilinea, nov. sp.** 3), Prout. — W. Africa.

NOTE. — *Thalassodes validaria*, Walker, *List Lep. Ins. Brit. Mus.* Vol. 35, p. 1007, belongs to the *Acidalinae*, *Thalassodes glauculata*, Walker, ibidem, Vol. 26, p. 1560, and *T. boliviensis*, Dognin, *Ann. Soc. Ent. Belg.* Vol. 44, p. 215, to the genus *Amaurinia* (*Larentiinae*). *Thalassodes albannularia* and *chlorozonaria*, Walker, *List Lep. Ins. Brit. Mus.* Vol. 22, p. 554 « Type lost; description not recognizable » — Hampson, *Fauna Ind. Moths*, Vol. 3, p. 519) appear to us to represent small forms of *Hypochrosis caenete* (Cramer); in the case of the latter, at least, this is fairly clear.

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1) **Thalassodes hypocrites, nov. sp.** — ♂, 38-42 mm. Excessively like *leucospilota*, Moore, scarcely distinguishable except as follows: hindwing with angle more pronounced; hindtibia in ♂ simple (in *leucospilota* ♂ fringed throughout with extremely long hair). In addition (though these would probably be liable to some variation) the white spots of the postmedian series are rather more extended into dashes; the antemedian white spot on inner margin of forewing and the postmedian on that of hindwing are slightly smaller; and the terminal line of both wings is more blackened at the vein-ends. Singapore (H. N. Ridley), type ♂; Khasis, one ♂; Sylhet (H. M. Parish), one ♂; Sikkim, July, 1909 (F. Moller), one ♂; Pirmad, Travancore R. S. Imray), one ♂; all in coll. Brit. Mus. The *Thalassodes leucospilota* recorded by Warren (*Novit. Zool.* Vol. 8, p. 193) from Penang will also without doubt be this species, which has been heretofore overlooked. We have only seen true *leucospilota* from Ceylon.

2) **Thalassodes aucta, nov. sp.** — ♂, 42-46 mm. Face green. Palpus slightly less than one and a half times the length of diameter of eye, third joint scarcely over one-third the length of second joint; green above, white beneath. Antenna ochreous (more green when fresh), shaft partly white. Thorax and abdomen green above, the latter without white spots or line. Wings shaped, coloured and marked as in the typical group (*pilaria*, *opalina*, etc.), hindwing with the angle moderately pronounced (as in *opalina*); lines moderately distinct, postmedian of forewing not dentate, of hindwing very slightly denticulate on the veins. Fringes narrowly greenish proximally, pale yellow distally. Hindtibia not dilated, the spurs rather short. Forewing with M^1 varying, connate to stalked, hindwing with DC^2 scarcely at all sinuous. Genitalia with uncus tapering, with broad rounded socii, gnathos slightly scobinated, harpe fused, narrow above, with strong curved hook on inner margin, vinculum rounded, penis pectiniate, broader above; from the margin of the eighth sternite protrude a pair of long tapered horns, widely apart. Cherrapunji, Assam, type and others in coll. L. B. Prout; Dharmsala, in coll. Brit. Mus. It is just possible that this will prove to be the true *veraria* of Guenée, although he gives its expanse as only 38 mm. But we have left undescribed, as more probably his *veraria*, a more widely-distributed species ocurring in India and Java, very similar to *aucta*, but smaller (35-38 mm.), the angle of hindwing on the average slightly less strong, the third palpal joint nearly one-half as long as the second, the hindtibial spurs longer, the fringes usually clearer yellow. Should *veraria* prove to be = *aucta*, or distinct from both, this will stand as a species, and we therefore give it the provisional name of **Thalassodes falsaria**, *nov. sp.*, Prout, typified by a ♂ from the Khasis in coll. L. B. Prout.

3) **Thalassodes dentatilinea, nov. sp.** — ♂, 26 mm. Face red-brown. Palpus red-brown above, second joint white beneath, third joint rather elongate, ochreous beneath. Head blue-green, narrowly white between antennæ. Antennal shaft white proximally, reddish ochreous distally. Thorax and abdomen blue-green above, whitish beneath. Foreleg red-brown above. Hindtibia dilated with hair-pencil. Forewing with apex acute; blue-green, strongly strigulated with white, the costal edge narrowly ochreous; antemedian line scarcely distinguishable among the strigulæ, oblique outwards from one-fifth costa to one-third inner margin, outcurved in cell and in submedian area; postmedian slightly more distinct, parallel with termen, at 4 mm. therefrom, markedly dentate; fringe pale ochreous. Hindwing with the angle at R^3 strong; colour and strigulation as in forewing; no antemedian line; an interrupted white mark along DC; postmedian line as in forewing, hence strongly bent in middle, as in the rest of the genus. Underside paler, unmarked. Aba, S. Nigeria, 16 May, 1910 (J. J. Simpson). Type in coll. Brit. Mus., presented by G. A. K. Marshall, on behalf of the Entomological Commission. A second ♂, from Cape Coast Castle (G. A. Higlett), also in coll. Brit. Mus., is clearly conspecific, but with the forewing so rubbed as to obscure the markings. The species is recognizable by its small size, dentate postmedian line and rather strongly angled hindwing, and is erratic in the venation. SC^1 being stalked; in the type it arises before R^1, but in the Cape Coast Castle specimen it has migrated to beyond R^1, and SC^2 to beyond SC^5. The antennal pectinations are of the normal structure, but reach to fully two-thirds.

108. Genus ERETMOPUS, Turner

Eretmopus. Turner, Proc. Linn. Soc. N. S. Wales, Vol. 35, p. 588 (1910).

Characters. — Face smooth. Palpus moderate to longish, second joint rough-scaled, third joint smooth, in ♂ moderate, in ♀ elongate. Tongue developed. Antenna well over one-half, in ♂ bipectinate to beyond one-half, the pectinations nearly as in *Thalassodes*, apical part nearly simple, very shortly ciliated; in ♀ very shortly ciliated. Pectus densely hairy. Hindtibia in ♂ much dilated, hairy and with dense tufts of floccous hair, all spurs wanting, hindtarsus aborted, flattened, densely rough-scaled (**Pl. 5, Fig. 20**); hindtibia in ♀ with terminal spurs only. Abdomen not crested. Frenulum in ♂ moderately strong, but not long, and arising from before basal expansion; in ♀ wanting. Forewing with costa shouldered at base, then straight, well arched near apex, apex moderate, termen nearly straight, oblique, tornus pronounced, cell somewhat less than one-half, DC^3 incurved or inangled, SC^1 free, SC^2 normal, R^1 longish-stalked, R^2 from much above middle of DC, M^1 connate or approximated; hindwing with apex squared, termen convex, weakly elbowed at R^3, tornus squared, cell short, DC^3 oblique, sinuous, C closely approximated to cell to nearly one-half, then rapidly diverging, SC^2 rather long-stalked, R^1 from very near R^1, M^1 shortly stalked (sometimes very shortly).

Early stages unknown.

A near relative of the preceding genus, differing in the leg structure in both sexes and in the somewhat less oblique discocellulars of hindwing. The position of R^2, especially in the hindwing, is also more extreme.

Type of the genus : *Eretmopus marinaria* (Guenée) = *Thalassodes marinaria*, Guenée (1910).

Geographical distribution of species. — Australian.

1. *E. marinaria* (Guenee). India to Philippines and N. Australia.

Thalassodes marinaria, Guenee, Spec. Gén. Lep. Vol. 9, p. 361 (1858).
Geometra discissa, Walker, List Lep. Ins. Brit. Mus. Vol. 22, p. 517 (1861).
Geometra penicillata, Walker, ibidem, p. 525 (1861).
Thalassodes depulsata, ♀, Walker, ibidem, p. 555 (1861) (nec ♂).
Eretmopus marinaria, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 35, p. 589 (1910).

109. Genus PRASINOCYMA, Warren

Prasinocyma. Warren, Novit. Zool. Vol. 4, p. 41 (1897).
Pauresthes. Warren, ibidem, Vol. 10, p. 359 (1903).
Pœcilostigma. Warren, ibidem, p. 361 (1903).
Pyrrhaspis. Warren, ibidem, p. 362 (1903).

Characters. — Face smooth. Palpus moderate to long, usually rather slender, second joint not or only moderately rough scaled, third joint smooth, in ♂ rather short to moderate, in ♀ long. Tongue present. Antenna in ♂ bipectinate, with moderate to longish branches, apex nearly simple; in ♀ nearly simple. Pectus moderately hairy. Femora nearly glabrous. Hindtibia in ♂ sometimes dilated with hair-pencil, in both sexes with all spurs; ♂ very exceptionally with a slight terminal process, of no generic significance. Abdomen not crested. Frenulum in ♂ present, slender, arising from before basal expansion, in ♀ wanting. Forewing with costa somewhat arched, termen usually smooth (sometimes waved), oblique, cell somewhat less than one-half, DC curved SC^1 nearly always from cell, free, or

anastomosing with C, scarcely ever with SC^2, SC^2 normal, R^1 connate or short-stalked, rarely separate, R^2 occasionally from much above middle, M^1 about connate; hindwing with termen rounded or weakly subcrenulate, or weakly elbowed at R^3 (never with pronounced tail 1), cell somewhat less than one-half, DC^3 variable, sometimes very deeply incurved, C approximated to cell for some distance, very occasionally with brief anastomosis, diverging near middle, SC^2 stalked, R^2 occasionally from near R^1, M^1 usually connate or stalked. ♂ genitalia with uncus pointed, with small round socii, harpe angulated, penis pestillate, thickened and swollen in the centre; eighth sternite terminating in two points (*vermicularia; albicosta* and *floresaria* have also been examined, and suggest that there will be a good deal of variation, together with a definitely traceable relationship; but the structure-group is a large one, embracing *Iodis*, *Hemistola*, *Comostola*, etc., and not remote from the *Hemithea*-group).

Early stages scarcely known.

As Dr. Turner has observed (*Proc. Linn. Soc. N. S. Wales*, Vol. 35, p. 597), « the species included in this genus show considerable variety of facies, and considerable variation also in certain details of structure, and may possibly need to be divided ». None of the structural characters which we are using in the present work, however, seem to admit of such division on any satisfactory basis, and the variations are really not extreme. In the New Guinea group which Warren has made the basis of his *Pauresthes, Poecilostigma and Pyrrhaspis*, DC^3 shows a strong tendency to exaggerated incurvature, DC^2 of the forewing is sometimes oblique basewards (i. e. apex of cell produced), DC^2 of the hindwing, or of both, sometimes somewhat oblique outward, resulting in an acute angulation at the base of R^2; but these forms appear in varying degrees, and are in part shared by other sections of the genus, so that we have not been able to utilize them. The scaling of the species is usually rather fine and thin, often with white strigulation (reminding of *Thalassodes*), but this is by no means invariable. The abdomen is occasionally adorned with a dorsal pattern, and exceptionally (e. g. *coerulea*) the largest of the spots may be slightly embossed; but there are never any real crests.

Type of the genus : *Prasinocyma vermicularia* (Guenée) = *Thalassodes vermicularia*, Guenée.

Geographical distribution of species. — Indo-Australian, Æthiopian.

1. *P. vermicularia* (Guenee). — S. Africa.
   Thalassodes vermicularia, Guenée, Spec. Gén. Lép. Vol. 9, p. 359 (1858).
   Thalassodes dilucida, Walker, List Lep. Ins. Brit. Mus. Vol. 22, p. 548 (1861).
2. *P. simiaria* (Guenée). — Senegal.
   Thalassodes simiaria, Guenee, Spec. Gén. Lep. Vol. 9, p. 359 (1858).
3. *P. germinaria* (Guenée). — Abyssinia.
   Thalassodes germinaria, Guenée, Spec. Gen. Lép. Vol. 9, p. 360 (1858).
4. *P. cellularia* (Guenée). — Réunion.
   Thalassodes cellularia, Guenée, Maillard's La Reunion, Annexe G, p. 52 (1862).
5. *P. congrua* (Walker). — W. Africa to Uganda.
   Geometra congrua, Walker, Proc. Nat. Hist. Soc. Glasgow, Vol. 1 (2), p. 371 (1869).
   Thalassodes nigripunctata, Warren, Novit. Zool. Vol. 4, p. 46 (1897).
   Thalassodes congrua, Swinhoe, Trans. Ent. Soc. Lond. p. 544 (1904).
6. *P. scissaria* (Felder). — S. Africa.
   Thalassodes scissaria, Felder, Reise Novara, Lep. Het. t. 127, f. 9 (1875).
7. *P. hadrata* (Felder). — Cape.
   Nemoria (?) hadrata, Felder, Reise Novara, Lep. Het. t. 127, f. 27 (1875).
   Thalassodes hadrata part., Swinhoe, Trans. Ent. Soc. Lond. p. 544 (1904) (2).

1) Except in *crossota*, which we have not seen and which is quite doubtfully placed.
2) The specimen from the Gold Coast, referred here by Swinhoe, is quite wrongly determined, a damaged ♀ perhaps related to *albisticta*, Warren.

8. *P. pallidulata* (Mabille) (huj. gen.?) 1). — Madagascar.
Thalassodes pallidulata, Mabille, C. R. Soc. Ent. Belg. Vol. 23, p. XXI (1880).

9. *P. deticataria* (Möschler). — W. Africa.
Thalassodes deticataria, Möschler, Abh. Senckenb. Nat. Ges. Vol. 15 (1), p. 93 (1887).

10. *P. unipuncta*, Warren. — Natal, ? British E. Africa.
Prasinocyma unipuncta, Warren, Novit. Zool. Vol. 4, p. 44 (1897).

11. *P. albifimbria* (Warren). — British Central Africa.
Thalassodes albifimbria, Warren, Novit. Zool. Vol. 4, p. 214 (1897).

12. *P. tenuis* (Warren). — Niger Coast.
Syndromodes tenuis, Warren, Novit. Zool. Vol. 5, p. 16 (1898) (♂, nec ♀).

13. *P. rubrimacula* (Warren). — Unyoro.
Thalassodes rubrimacula, Warren, Novit. Zool. Vol. 6, p. 292 (1899).

14. *P. albisticta* (Warren). — Tropical Africa.
Antharmostes ? albisticta, Warren, Novit. Zool. Vol. 8, p. 205 (1901).

15. *P. differens* (Warren). — British E. Africa.
Agraptochlora differens, Warren, Novit. Zool. Vol. 9, p. 463 (1902).

16. *P. pupillata* (Warren). — British E. Africa.
Thalassodes pupillata, Warren, Novit. Zool. Vol. 9, p. 490 (1902).

17. *P. stictimargo* (Warren). — E. Africa.
Thalassodes stictimargo, Warren, Novit. Zool. Vol. 9, p. 497 (1902).

18. *P. dohertyi*, Warren. — British E. Africa.
Prasinocyma dohertyi, Warren, Novit. Zool. Vol. 10, p. 271 (1903) 2).

19. *P. ampla*, Warren. — Angola.
Prasinocyma ampla, Warren, Novit. Zool. Vol. 11, p. 405 (1904).

20. *P. pictifimbria*, Warren. — Angola, Abyssinia.
Prasinocyma pictifimbria, Warren, Novit. Zool. Vol. 11, p. 86 (1904).

21. *P. pulchraria*, Swinhoe. — Tropical Africa.
Prasinocyma pulchraria, Swinhoe, Trans. Ent. Soc. Lond. p. 544 (1904).

22. *P. salutaria* (Swinhoe). — British E. Africa.
Thalassodes salutaria, Swinhoe, Trans. Ent. Soc. Lond. p. 544 (1904).

23. *P. xanthopera*, Bastelberger. — Congo.
Prasinocyma xanthopera, Bastelberger, Intern. Ent. Zeit. Guben, Vol. 3, p. 101 (1909).

24. *P. dorsipunctata*, Warren. — Natal.
Prasinocyma dorsipunctata, Warren, Ann. S. Afric. Mus. Vol. 10 (1), p. 21 (1911).

25. **P. sanguinicosta, nov. sp.** 3), Prout. — Sudan.

26. **P. niveisticta, nov. sp.** 4), Prout. — Natal.

1) Swinhoe (*Trans. Ent. Soc. Lond.* 1904, p. 547) unites this with *glacialis*, Butler (*Metallochlora*); from Mabille's description, this seems to us absolutely impossible.

2) *Prasinocyma circumpunctata* on type labels.

3) **Prasinocyma sanguinicosta, nov. sp.** — ♂, 27 mm. Face crimson. Palpus crimson above, white beneath. Antennal shaft red, mixed with yellow-brown; pectinations moderate, yellow brown. Vertex pale green, narrowly whitish between antennæ; occiput green. Thorax green above, whitish beneath (abdomen discoloured). Foreleg crimson. Wings shaped, coloured and strigulated as in *vermicularia*, Guenée, the colour perhaps slightly more yellowish; costa of forewing bright crimson above and beneath; both wings above with minute black, reddish tinged discal dot; fringes concolorous. Under surface paler. Khartum, February 12th, 1909 (G. B. Longstaff). Type in coll. Brit. Mus. Easily distinguished by the broadly bright red costa. In *pulchraria*, Swinhoe, the costal edge is *very narrowly* tinged with red, but that is a larger, broader-winged insect of a different shade of green, with less minute discal dots, etc. In *pulchraria* the ♂ hindleg is simple, in *sanguinicosta* dilated with hair pencil; in the former SC^1 is free, in the latter it anastomoses with C. R^1 is well stalked with SC^{2+3}.

4) **Prasinocyma niveisticta, nov. sp.** — ♂, 28 mm. Face green. Palpus ochreous above, paler beneath; terminal joint rather small, fuscous-reddish. Antenna ochreous, shaft whitish at base; pectinations moderate. Head green, narrowly whitish between antennæ. Thorax and base of abdomen green dorsally, pale beneath; dorsum of abdomen apparently marked with white (partly discoloured). Hindtibia not dilated, with four approximated spurs. Wings opaque bluish green, nearly as in *hadrata*, Felder. Forewing with costal edge narrowly bright yellow ochre; a very small white spot on middle of inner margin, margined with fuscous distally; termen of both wings with pure white dots at the vein-ends and a very small dark blotch at tornus, margined proximally by a white crescent; fringe green proximally, spotted with reddish at the vein-ends, greyer and scarcely marked with red distally. Hindwing very weakly e bowed at R^3. Underside whitish, costa of forewing more broadly yellow ochre than above, paling off somewhat towards apex; termen and fringe not ornamented. Durban, Natal, 1909 (G. F. Leigh). Type in coll. Brit. Mus. Closely related to *hadrata*, Felder, agreeing in venation, but with third joint of palpus shorter, elbow in hindwing weaker, inner-marginal spot of forewing smaller, and with tornal ornamentation somewhat recalling that of *Heterorachis devocata*, Walker.

27. **P. rugistrigula, nov. sp.** 1), Prout. — Ashanti.

28. **P. neavei, nov. sp.** 2), Prout. — Nyassaland.

29. **P. bifimbriata, nov. sp.** 3), Prout. — **Pl. 3, Fig. 9.** — Transvaal.

30. *P. semicrocea* (Walker). — E. to S. Australia.

Geometra semicrocea, Walker, List Lep. Ins. Brit. Mus. Vol. 22, p. 528 (1861).
Chlorochroma intermixta, Walker, ibidem, p. 563 (1861).
Chlorochroma decisissima, Walker, ibidem, p. 564 (1861).
Iodis semicrocea, Meyrick, Proc. Linn. Soc. N. S. Wales (2), Vol. 2, p. 887 (1888).
Iodis subalpina, Lucas, ibidem, Vol. 3, p. 1264 (1888).
Thalassodes albicosta, Swinhoe, Lep. Het. Oxford Mus. Vol. 2, p. 400 (1900) (nec Walker).
Prasinocyma semicrocea, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 35, p. 599 (1910).

31. *P. albicosta* (Walker). — N. to E. Australia, New Guinea, Loyalty Islands.

Geometra albicosta, Walker, List Lep. Ins. Brit. Mus. Vol. 22, p. 529 (1861).
Iodis albicosta, Meyrick, Proc. Linn. Soc. N. S. Wales (2), Vol. 2, p. 888 (1887).
Iodis bicolora, Lucas, ibidem, Vol. 3, p. 1265 (1888).
Prasinocyma rufitincta, Warren, Novit. Zool. Vol. 4, p. 44 (1897).
Thalassodes flavicosta, Warren, ibidem, p. 214 (1897).
Prasinocyma albicosta, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 35, p. 598 (1910).

32. *P. floresaria* (Walker). — Flores.

Geometra floresaria, Walker, List Lep. Ins. Brit. Mus. Vol. 35, p. 1004 (1866).
: *Œnospila floresaria*, Warren, Novit. Zool. Vol. 3, p. 292 (1896).

33. *P. oxycentra* (Meyrick) (præc. var.?). — N. Queensland, New Guinea, Louisiades, Moluccas.

Iodis oxycentra, Meyrick, Proc. Linn. Soc. N. S. Wales (2), Vol. 2, p. 888 (1888).
Œnospila floresaria (part.), Warren, Novit. Zool. Vol. 3, p. 292 (1896).
Œnospila oxycentra, Warren, ibidem, Vol. 5, p. 422 (1898).
Prasinocyma floresaria, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 35, p. 600 (1910).

34. *P. nivisparsa* (Butler) (huj. gen.?). — Duke of York Island to New Guinea.

Comibaena nivisparsa, Butler, Ann. Mag. Nat. Hist. (5), Vol. 10, p. 232 (1882).
Antsogamia nivisparsa, Warren, Novit. Zool. Vol. 4, p. 33 (1897).
Geometra nivisparsa, Pagenstecher, Zoologica, Vol. 29, p. 153 (1900).

35. *P. ocyptera* (Meyrick). — Queensland, W. Australia.

Iodis ocyptera, Meyrick, Proc. Linn. Soc. N. S. Wales (2), Vol. 2, p. 887 (1888).
Iodis gracilis, Lucas, ibidem, Vol. 3, p. 1266 (1888).
Prasinocyma ocyptera, Warren, Novit. Zool. Vol. 5, p. 422 (1898).

36. *P. rhodocosma* (Meyrick). — Australia.

Iodis rhodocosma, Meyrick, Proc. Linn. Soc. N. S. Wales (2), Vol. 2, p. 889 (1888).
Prasinocyma rhodocosma, Turner, ibidem, Vol. 35, p. 597 (1910).

1) **Prasinocyma rugistrigula, nov. sp.** — ♂, 40 mm. Face dull light reddish, partly overlaid with dull green (possibly somewhat faded). Palpus reddish above, whitish beneath, third joint minute. Antennal shaft dirty white near base, becoming reddish brown; pectinations bright brown, the outer series long near base, rather rapidly shortening. Vertex, occiput, thorax and abdomen dorsally green. Wings rather dull glaucous green, very smooth-scaled (presenting an almost greased appearance), strongly but irregularly strigulated with whitish. Forewing with costa very narrowly pale ochreous brownish; a small indistinct fuscous discal dot. Hindwing with the discal dot dark greenish, obscure, slightly diffuse, placed close to the base of R^2; beneath it, on the submedian fold, a short fuscous dash. Fringes concolorous. Under surface paler, unmarked. Coomassie (H. Whiteside). Type in coll. Brit. Mus. Wings shaped as in *Thalassodes*; forewing with SC^1 anastomosing, M^1 very shortly stalked. Hindwing with both the stalkings.

2) **Prasinocyma neavei, nov. sp.** — ♀, 36 mm. Like the preceding in markings (except that the discal spot of hindwing is more elongate and the fold-dash shorter), but differing essentially in shape, which is virtually that of typical *Prasinocyma*, the hindwing only very slightly bent at R^3. Further differs as follows: face bright green, upper part narrowly reddish brown; palpus with second and third joints much elongate, slender, red-brown above, white beneath and at tips of joints; costa of forewing narrowly white; colour of wings somewhat brighter, bluer, not greasy-looking; forewing with SC^1 free, M^1 separate; hindwing with SC^2 shorter-stalked, M^1 connate. Mlangi Mountain, Nyassaland, 6000-7000 feet, 2 May, 1910 (S. A. Neave). Type in coll. Brit. Mus.

3) **Prasinocyma bifimbriata, nov. sp.** — ♀, 26 mm. Face green (fading to ochreous). Palpus greenish, terminal joint more ochreous. Antenna proximally white above, distilly ochreous. Thorax and abdomen green above, anal extremity and underside whitish. Legs ochreous, forecoxa marked with green. Forewing apple-green, not strigulated, costal edge ochreous, a small grey mark in fringe at apex, no transverse lines, discal dot black, minute, fringe ample, proximal half pale ochreous, distal half grey; hindwing the same, excepting costa, termen slightly bent at R^3. Underside much paler, no discal spots, apical mark and fringe as above. Three Sisters, Transvaal, 9 March, 1911. Type in coll. A. J. T. Janse. Rather suggestive of the *Lissochlora*- and *Miantonota*-groups of the genus *Racheospila*, though of a less yellow green. In the forewing SC^1 is free, R^1 and M^1 about connate; in the hindwing SC^2 and M^1 are both stalked, DC very little oblique.

37. *P. exoterica* (Meyrick) (huj. gen.?). — New South Wales.
Iodis exoterica, Meyrick, Proc. Linn. Soc. N. S. Wales (2), Vol. 2, p. 801 (1888).
Prasinocyma exoterica, Turner, ibidem, Vol. 35, p. 598 (1910).

38. *P. iosticta* (Meyrick). — E. Australia.
Iodis iosticta, Meyrick, Proc. Linn. Soc. N. S. Wales (2), Vol. 2, p. 803 (1888).
Prasinocyma iosticta, Turner, ibidem, Vol. 35, p. 599 (1910).

39. *P. crossota* (Meyrick) (huj. gen.?). — Queensland.
Iodis crossota, Meyrick, Proc. Linn. Soc. N. S. Wales (2), Vol. 2, p. 804 (1888).
Prasinocyma crossota, Turner, ibidem, Vol. 35, p. 598 (1910).

40. *P. absimilis*, Warren (huj gen.?). — Dutch New Guinea.
Prasinocyma absimilis, Warren, Novit. Zool. Vol. 8, p. 193 (1901).

41. *P. indistincta* (Warren). — British New Guinea.
Chlorochroma indistincta, Warren, Novit. Zool. Vol. 10, p. 355 (1903).

42. *P. marginepunctata* (Warren). — British New Guinea.
Chlorochroma marginepunctata, Warren, Novit. Zool. Vol. 10, p. 356 (1903).

43. *P. minutipuncta* (Warren). — British New Guinea.
Chlorochroma minutipuncta, Warren, Novit. Zool. Vol. 10, p. 356 (1903).

44. *P. polluta* (Warren). — British New Guinea.
Chlorochroma polluta, Warren, Novit. Zool. Vol. 10, p. 356 (1903).

45. *P. punctulata* (Warren). — British New Guinea.
Chlorochroma punctulata, Warren, Novit. Zool. Vol. 10, p. 357 (1903).

46. *P. punctifimbria* (Warren) (huj. gen.?). — British New Guinea.
Hemistola ? punctifimbria, Warren, Novit. Zool. Vol. 10, p. 358 (1903).

47. *P. fragilis* (Warren). — British New Guinea.
Iodis fragilis, Warren, Novit. Zool. Vol. 10, p. 359 (1903).

48. *P. caniola* (Warren). — British and Dutch New Guinea, N. Queensland.
Pauresthes caniola, Warren, Novit. Zool. Vol. 10, p. 360 (1903).
Prasinocyma phaeostigma, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 35, p. 601 (1901) nov. syn.

49. *P. signifera* (Warren). — British New Guinea.
Pauresthes signifera, Warren, Novit. Zool. Vol. 10, p. 360 (1903).

50. *P. vagabunda* (Warren). — British and Dutch New Guinea.
Poecilostigma vagabunda, Warren, Novit. Zool. Vol. 10, p. 361 (1903).

51. *P. periculosa* (Warren). — British and Dutch New Guinea.
Poecilostigma periculosa, Warren, Novit. Zool. Vol. 10, p. 361 (1903).

52. *P. coerulea* (Warren). — British New Guinea.
Perrhaspis coerulea, Warren, Novit. Zool. Vol. 10, p. 362 (1903) [1].

53. *P. mistifimbria*, nov. nom., Prout. — British New Guinea.
Perrhaspis punctifimbria, Warren, Novit. Zool. Vol. 10, p. 362 (1903) nec *punctifimbria*, Warren, ibidem, p. 358.

54. *P. discata* (Warren). — British New Guinea.
Chlorochroma discata, Warren, Novit. Zool. Vol. 13, p. 83 (1906).

55. *P. flavilimes* (Warren). — British New Guinea.
Chlorochroma flavilimes, Warren, Novit. Zool. Vol. 13, p. 83 (1906).

56. *P. geminipuncta* (Warren). — British New Guinea.
Chlorochroma geminipuncta, Warren, Novit. Zool. Vol. 13, p. 83 (1906).

57. *P. laticostata* (Warren) (huj. gen.?). — British New Guinea.
Chlorochroma laticostata, Warren, Novit. Zool. Vol. 13, p. 84 (1906).

58. *P. latistriga* (Warren). — British New Guinea.
Chlorochroma latistriga, Warren, Novit. Zool. Vol. 13, p. 84 (1906).

59. *P. obsoleta* (Warren). — British and Dutch New Guinea.
Chlorochroma obsoleta, Warren, Novit. Zool. Vol. 13, p. 84 (1906).

60. *P. punctilligera* (Warren). — British New Guinea.
Chlorochroma punctilligera, Warren, Novit. Zool. Vol. 13, p. 85 (1906).

[1] *Rothschildia coerulea* on type labels.

61. *P. ruficosta* (Warren). British New Guinea.
Chlorochroma ruficosta, Warren, Novit. Zool. Vol. 13, p. 85 (1906).

62. *P. rufistriga* (Warren). British and Dutch New Guinea.
Chlorochroma rufistriga, Warren, Novit. Zool. Vol. 13, p. 85 (1906).

63. *P. vestigiata* (Warren). British New Guinea.
Chlorochroma vestigiata, Warren, Novit. Zool. Vol. 13, p. 86 (1906).

64. *P. bicolor* (Warren). British New Guinea.
Chlorochroma bicolor, Warren, Novit. Zool. Vol. 14, p. 131 (1907).

65. *P. fraterna* (Warren). British New Guinea.
Chlorochroma fraterna, Warren, Novit. Zool. Vol. 14, p. 131 (1907).

66. *P. intermedia* (Warren). British New Guinea.
Chlorochroma intermedia, Warren, Novit. Zool. Vol. 14, p. 131 (1907).

67. *P. sororcula* (Warren). British New Guinea.
Chlorochroma sororcula, Warren, Novit. Zool. Vol. 14, p. 132 (1907).

68. *P. florediscata* (Warren). British New Guinea.
Poecilostigma florediscata, Warren, Novit. Zool. Vol. 14, p. 135 (1907).

69. *P. glauca* (Warren). British New Guinea.
Pyrrhaspis glauca, Warren, Novit. Zool. Vol. 14, p. 135 (1907).

70. *P. marina* (Warren). British New Guinea.
Pyrrhaspis marina, Warren, Novit. Zool. Vol. 14, p. 135 (1907).

71. *P. anomoea*, Turner. N. Queensland.
Prasinocyma anomoea, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 35, p. 601 (1910).

110. Genus ENDEMIA, Warren

Endemia. Warren, Novit. Zool. Vol. 10, p. 357 (1903).

Characters. — Face smooth. Palpus in ♂ shortish, in ♀ moderate, in both sexes slender, second joint with moderately appressed scales, third joint smooth, relatively rather long. Tongue present. Antenna moderate, in ♂ bipectinate to about three-fourths with moderate branches, in ♀ nearly simple. Hindtibia in ♂ dilated, with hair-pencil and short stout process, about one-half the length of tarsus, which is very short; in ♂ with four short, in ♀ with four moderate spurs. Abdomen not crested. Frenulum in ♂ slender, arising from before basal expansion, in ♀ wanting. Forewing with costa nearly straight, apex not acute, termen oblique, slightly rounded, cell less than one-half, much produced apically, DC deeply incurved, SC^1 from near end of cell, anastomosing with C and SC^2, SC^2 normal, R^1 connate, M^1 connate, hindwing with apex rounded, termen rounded, very faintly bent at R^3, tornus squared, cell less than one-half, DC^3 somewhat incurved, C anastomosing with cell for slightly more than a point, rapidly diverging, SC^2 shortly stalked, R^2 not very characteristic, M^1 shortly stalked.

Early stages unknown.

A genus of somewhat uncertain validity, to which we have been able to give but little study; might possibly be merged in *Prasinocyma*, the differences in palpus, leg-structure and venation not being very momentous.

Type of the genus : *Endemia tenera*, Warren (1903).

Geographical distribution of species. — New Guinea.

1. *E. tenera*, Warren. British New Guinea.
Endemia tenera, Warren, Novit. Zool. Vol. 10, p. 358 (1903).

111 Genus STREPSICHLORA, Warren

Strepsichlora. Warren, Novit. Zool. Vol. 14, p. 136 (1987).

Characters. — Face smooth. Palpus with second joint long, with closely appressed scales, third joint in ♂ moderate, scarcely more slender than second, in ♀ rather longer than in ♂. Tongue present. Antenna over one-half, in ♂ bipectinate to nearly four-fifths, with moderate branches, apex merely ciliated; in ♀ nearly simple. Pectus hairy. Femora glabrous. Hindtibia in ♂ rather long, dilated with hair-pencil in sheath, much as in *Hemithea*, no process, in both sexes with all spurs. Tarsus not aborted. Abdomen slender, minutely crested. Frenulum in ♂ short, in ♀ wanting. Forewing broad, costa arched, apex squared, termen straight, little oblique, tornus pronounced, cell almost one-half, DC strongly incurved, SC^1 from cell, anastomosing with C and sometimes with SC^2, SC^2 normal, R^1 just separate, M^1 separate, hindwing with termen minutely toothed at R^5, tornus produced, cell less than one-half, DC^3 very slightly incurved anteriorly, becoming strongly oblique, C shortly approximated to cell near base, then very strongly diverging. SC^2 short-stalked, R^2 very characteristic, M^1 separate.

Early stages unknown.

Similar remarks apply to this as to the preceding genus: the dorsal crests are so slight as to be doubtfully generic.

Type of the genus : *Strepsichlora acutilunata,* Warren (1907).

Geographical distribution of species. — New Guinea.

1. *S. acutilunata*, Warren. British New Guinea.
   Strepsichlora acutilunata, Warren, Novit. Zool. Vol. 14, p. 136 (1907).
2. *S. inquinata* (Warren). British New Guinea.
   Rhomborista inquinata, Warren, Novit. Zool. Vol. 10, p. 363 (1903).
   Strepsichlora inquinata, Warren, ibidem, Vol. 14, p. 136 (1907).

112. Genus OXYCHORA, Warren

Oxychora. Warren, Novit. Zool. Vol. 5, p. 236 (1898).

Characters. — Face smooth. Palpus rather long, very slender, with appressed scales, third joint in ♂ elongate (♀ unknown). Tongue present. Antenna in ♂ bipectinate to nearly two-thirds, with strong, rapidly shortening branches. Pectus slightly hairy. Femora glabrous. Hindleg short, hindtibia dilated with hair-pencil, all spurs present. Abdomen not crested. Frenulum slender, colourless, arising from before well-marked basal expansion. Forewing with costa shouldered at base, then slightly arched, apex blunt, termen curved, oblique, cell almost one-half, produced apically, DC^2 very deeply mangled, becoming very oblique, SC^1 about connate, free 1), SC^2 normal, R^1 short-stalked, M^1 widely separate; hindwing with costa rounded, termen rounded, slightly elbowed at R^5, tornus not pronounced, DC^2 vertical or slightly oblique inwards, DC^3 excessively oblique, C anastomosing with cell at a point near base, SC^2 rather long-stalked, M^1 widely separate.

Early stages unknown.

1) In the type specimen, on the left wing only, SC^1 anastomoses at a point with SC^2, quite near the apex. Warren, in diagnosing the genus, overlooked that this was a more asymmetrical sport.

The two species placed here agree very exactly in structure, except that the type-species has the scaling very fine and thin, subdiaphanous. The difference in facies suggests the possibility that they have independently evolved from some cognate form (? in *Prasinocyma*), but the peculiar venation seems quite adequate for generic recognition.

Type of the genus : *Oxychora tenuis*, Warren (1898).

Geographical distribution of species. — Sunda Islands, New Guinea.

1. *O. tenuis*, Warren — Buru (Sunda Islands).
   Oxychora tenuis, Warren, Novit. Zool. Vol. 5, p. 236 (1898).
2. *O. ruficincta* (Warren). — British New Guinea.
   Comostolodes ruficincta, Warren, Novit. Zool. Vol. 14, p. 132 (1907).

113. Genus GIGANTOTHEA, nov. gen., Prout

Gigantothea, nov. gen. Prout.

Characters. — Face smooth. Palpus moderate to rather long, second joint rather close-scaled, third joint distinct, in ♂ moderately elongate, in ♀ rather longer. Tongue developed. Antenna longish, in ♂ bipectinate to little beyond one-half with moderate branches, in ♀ almost simple. Pectus hairy. Femora glabrous. Hindtibia in ♂ fully twice as long as tarsus, with sheath and long, strong hair-pencil, median spurs wanting; in ♀ with all spurs. Abdomen not crested. Frenulum in ♂ rather slender, from before basal expansion, in ♀ obsolete. Forewing with costa gently arched, apex squared or slightly acute, termen faintly waved, gently curved, oblique, cell less than one-half, DC^3 incurved (often deeply), SC^1 from cell, bicurved, approaching successively C (sometimes with short anastomosis) and SC^2, SC^2 normal, R^1 stalked, R^2 from considerably above middle of cell, M^1 approximated to R^3; hindwing with apex moderate, termen convex, somewhat waved, slightly prominent at R^3, tornus pronounced, cell short, DC^3 somewhat curved, little oblique posteriorly, C approximated shortly to cell, then very strongly divergent, SC^2 stalked, R^2 from near R^1, M^1 stalked.

Early stages unknown.

Probably near some *Prasinocyma* (e. g. *rufistriga*), nothwithstanding that the leg-structure is almost that of *Hemithea*. Several features recall *Chrysochloroma*.

Type of the genus : *Gigantothea gigas* (Warren) = *Chlorochroma gigas*, Warren.

Geographical distribution of species. — New Guinea.

1. *G. gigas* (Warren). — British to Dutch New Guinea.
   Chlorochroma gigas, Warren, Novit. Zool. Vol. 10, p. 355 (1903).
2. *G. minor* (Warren).
   Chlorochroma gigas ab. *minor*, Warren, Novit. Zool. Vol. 10, p. 355 (1903).
   Chlorochroma minor, Warren, ibidem, Vol. 13, p. 85 (1906).

114. Genus ŒNOSPILA, Swinhoe

Œnospila (Warren, MS.) Swinhoe, Trans. Ent. Soc. Lond. p. 5 (1892).

Characters. — Face smooth. Palpus with second joint long, smooth-scaled, third joint in ♂ rather short, in ♀ very long. Tongue present. Antenna in ♂ bipectinate to scarcely beyond one-half, in ♀ lamellate, nearly simple. Pectus hairy. Femora glabrous. Hindtibia in ♂ much dilated, with strong

hair-pencil and moderate terminal process, median spurs present, the inner only long, terminals wanting or absolutely vestigial (Pl. 5, Fig. 13♂); in ♀ with four unequal spurs, the inner median long. Hindtarsus in ♂ rather short. Abdomen not crested. Frenulum in ♂ rather short and slender, from before well-marked basal expansion, in ♀ wanting. Forewing with costa rather straight, apex moderately sharp, termen oblique, very slightly curved, cell less than one half, usually produced apically, DC incurved, SC^1 free, SC^2 normal, R^1 usually stalked, R^2 from well above middle of cell, M^1 about connate; hindwing with termen nearly smooth to subcrenulate, usually bent at R^3, tornus pronounced, cell scarcely two-fifths, DC somewhat oblique posteriorly, C appressed to cell to near one-half, with very brief anastomosis, then very rapidly diverging, SC^2 stalked, R^2 from very near R^1, M^1 stalked. ♂ genitalia: uncus pointed, with large rounded socii, gnathos pointed, harpe rounded, with sacculus extended, terminating at right angles, penis pestillate. Apparently related to the *Hemithea*-group.

Larva. Rather slender, head bifid, eighth abdominal segment with pointed prominence (Moore, *Lep. Ceyl.* Vol. 3, p. 428, t. 194, f. 3*a*).

Probably derived from a form closely akin to *Prasinocyma flavesaria*. Those systematists who are entirely hostile to generic characters derived from the ♂ alone would perhaps prefer to make it a section of that genus, as its other characters are mostly found in one species or another of *Prasinocyma*; but the *ensemble* (♂ hindleg, unequal ♀ spurs, extreme ♀ palpus, apparently more constant and — at least sometimes — more pronounced anastomosis of C of hindwing with SC, and extreme position of R^2) appears to us to justify the retention of the genus. It has also much in common with *Chrysochloroma*.

Type of the genus: *Œnospila flavifusata* (Walker) = *Thalera flavifusata*, Walker (1862).

Geographical distribution of species. — India to N. Australia.

1. *Œ. flavifusata* (Walker). — India to N. Australia and Solomons.
   - *Thalera flavivusata*, Walker, List Lep. Ins. Brit. Mus. Vol. 22, p. 500, 1891.
   - *Thalera decussata*, Moore, Trans. Zool. Soc. Lond. p. 657, 1887.
   - *Thalera decussata phyllocyma*, Pagenstecher, Jahr. Nassau. Ver. Nat. Vol. 39, p. 154, 1886 (nov. syn.).
   - *Œnospila flavifusata*, Swinhoe, Trans. Ent. Soc. Lond. p. 5, 1892.
   - *Thalera flavifusata*, Hampson, Fauna Ind. Moths, Vol. 3, p. 508, 1895.
   - *Œnospila flavilinea*, Warren, Novit. Zool. Vol. 4, p. 212, 1897.
   - *Gelasma phyllocyma*, Warren, ibidem, Vol. 6, p. 330, 1899.
   - *Œnospila flavifusata*, Swinhoe, Trans. Ent. Soc. Lond. p. 674, 1902.
2. *Œ. strix* Butler. — N. India.
   - *Rhodostrophia strix*, Butler, Ill. Het. Coll. Brit. Mus. Vol. 7, p. 105, t. 126, f. 5, 1886.
   - *Thalera decussata strix*, Hampson, Fauna Ind. Moths, Vol. 3, p. 509, 1895.
   - *Œnospila strix*, Warren, Novit. Zool. Vol. 13, p. 242, 1906.
3. *Œ. secuta*, Warren (*præc.* var.?). — New Guinea to Woodlark Island.
   - *Œnospila fellata*, Warren, Novit. Zool. Vol. 5, p. 262, 1898.
   - *Œnospila strix* (part), Swinhoe, Trans. Ent. Soc. Lond. p. 674, 1902.
4. *Œ. lucifimbria*, Warren. — Solomon Islands.
   - *Œnospila lucifimbria*, Warren, Novit. Zool. Vol. 6, p. 27, 1899.
5. *Œ. simplex*, Warren (huj. gen.?). — W. Java.
   - *Œnospila simplex*, Warren, Novit. Zool. Vol. 6, p. 330, 1899.
6. **Œ. peristicta, nov. sp.** (), Prout. — Dutch New Guinea.

Œnospila peristicta nov. sp. ♂. 37 mm. Face green. Palpus green, whitish beneath. Vertex and proximal part of antennal pectination white. Scaping green. Thorax and abdomen green dorsally, the latter with small white spots. Forewing green with costal edge snow-white, broadening gradually to middle so as to reach nearly to SC and narrowing again distally; lines white, lunulate-dentate: the antemedian at about one-third and sinuate, postmedian at about two-thirds, the lunules very indistinct, the teeth on veins very distinct, being punctuated by large pure white spots; a terminal series, accompanied proximally by a slight darkening of the green ground-colour on the veins; cell-spot distinct, black, clouded over with red, terminal line represented by red-brown spots between the veins; fringe whitish (defective). Hindwing similar, without antemedian line or white costa. Underside much paler, unmarked, costa of forewing whitish. Fak Fak, Dutch New Guinea, 1100 feet, January-February, 1858 (A. F. Pratt). Type in coll. L. B. Prout. Nearest to *Œ. simplex*, of which we only know the ♂, but larger, the terminal line reduced to spots, etc. A true *Œnospila*, although greatly swollen, inner median spur much swollen, the other three spurs vestigial, but none entirely wanting.

115. Genus MAXATES, Moore

Maxates. Moore, Lep. Ceyl. Vol. 3, p. 436 (1887).

Characters. — Face smooth. Palpus in both sexes long, second joint shortly rough-scaled, reaching well beyond frons, third joint smooth, elongate (especially in ♀). Tongue developed. Antenna rather long, in ♂ bipectinate to nearly two-thirds, with long branches, in ♀ simple, pubescent. Pectus somewhat hairy. Femora nearly glabrous. Hindtibia in ♂ dilated, with rather strong hair-pencil, in both sexes with all spurs developed. Abdomen not crested. Frenulum in ♂ very slender, arising from before basal expansion, in ♀ wanting. Forewing with costa well arched, apex prominent, termen deeply crenulate (the longest tooth at R^3), cell short, DC^3 deeply inbent, SC^1 from cell, usually anastomosing or connected at a point with C, occasionally free, SC^2 normal, very rarely anastomosing at a point with SC^1, R^1 connate, R^2 from near R^1, M^1 connate or short-stalked: hindwing narrow, costa short, termen crenate, produced to a marked tooth at R^1 and prolonged to a tail at R^3, cell short, DC^3 oblique posteriorly, C shortly appressed (sometimes with anastomosis at a point or very briefly) to cell, then very rapidly diverging, SC^2 short-stalked (sometimes connate), R^2 from very near R^1, M^1 well stalked (Pl. 3, Fig. 12). ♂ genitalia with uncus pointed, socii large, gnathos with broad spatulate tip, harpe angulated, with pointed terminations, penis pestillate, spatulate, long coremata present: suggests a relationship to *Agathia* and to *Episthalma*.

Early stages unknown.

Type of the genus : *Maxates coelataria* (Walker) — *Thalassodes coelataria*, Walker (1887).

Geographical distribution of species. — India to Queensland.

1. *M. coelataria* (Walker). — India with Ceylon, Singapore, Borneo.
   Thalassodes coelataria, Walker, List Lep. Ins. Brit. Mus. Vol. 22, p. 552 (1861).
   Maxates callataria, Moore, Lep. Ceyl. Vol. 3, p. 436, t. 196, f. 2, 2a (1887).
   Maxates coelataria, Hampson, Fauna Ind. Moths, Vol. 3, p. 505 (1895).
2. *M. macariata* (Walker). — N. India.
   Thalassodes macariata, Walker, List Lep. Ins. Brit. Mus. Vol. 20, p. 1562 (1862).
   Maxates macariata, Hampson, Fauna Ind. Moths, Vol. 3, p. 505 (1895).
3. *M. tanygona* (Turner). — Queensland.
   Euchloris tanygona, Turner, Trans. Roy. Soc. S. Austral. Vol. 28, p. 223 (1904).
   Maxates tanygona, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 35, p. 588 (1910).

116. Genus IDIOCHLORA, nov. gen., Prout

Idiochlora (Warren, Novit. Zool. Vol. 3, p. 105, indescr.). **nov. gen.**, Prout.

Characters. — Face smooth. Palpus in ♂ quite moderate, in ♀ long, second joint smooth-scaled, third joint in ♂ very small, in ♀ very long, slender. Tongue present. Antenna in ♂ rather thick, lamellate, almost simple, in ♀ similar. Pectus somewhat hairy. Hindtibia in ♂ scarcely dilated, in both sexes with all spurs. Abdomen not crested. Frenulum in ♂ slender, from before basal expansion, in ♀ wanting. Forewing with costa gently arched, apex rather acute, termen waved, oblique, anterior half faintly subconcave, cell short, DC somewhat incurved, SC^1 from cell, sometimes anastomosing with C, SC^2 normal, R^1 separate, M^1 well separate; hindwing with termen waved, produced to short tail at R^3, cell short, broad, DC rather straight, C shortly approximated to cell near base (touching or

perhaps sometimes anastomosing at a point), rapidly diverging, SC^2 connate, sometimes very shortly stalked, M^1 shortly (or very shortly) stalked.

Early stages unknown.

Not very sharply defined from the succeeding genus, though differing in a number of minor points; the convergence of characters is perhaps in part accidental, the facies being decidedly different.

Type of the genus : *Idiochlora ophthalmicata* (Moore) = *Thalassodes ophthalmicata*, Moore.

Geographical distribution of species. — N. India.

1. *I. ophthalmicata* (Moore). N. India.

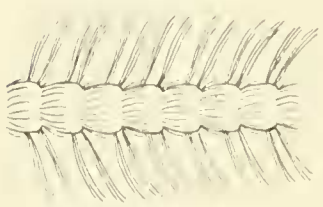
Thalassodes ophthalmicata, Moore, Proc. Zool. Soc. Lond. p. 637 (1867).
Idiochlora ophthalmicata, Warren, Novit. Zool. Vol. 3, p. 105 (1896).

117. Genus METALLOCHLORA, Warren

Metallochlora. Warren, Novit. Zool. Vol. 3, p. 290 (1896).
Chrysomphe. Warren, ibidem, p. 364 (1896).
Cosmogonia. Warren, ibidem, Vol. 4, p. 210 (1897).

Characters. — Face smooth. Palpus in ♂ moderate, in ♀ rather long, second joint with moderately appressed scales, third joint in ♂ short, in ♀ more or less elongate. Tongue present. Antenna in ♂ ciliated (often serrate, usually with fascicles, Fig. 14, in ♀ minutely ciliated. Pectus moderately hairy. Hindtibia in ♂ dilated with hair-pencil, usually rather long and with a sheath nearly as in *Hemithea*, in both sexes with all spurs. Abdomen usually with compact, glossy, usually metallic crests (bosses). Frenulum present in ♂, from before basal expansion, wanting in ♀. Forewing with costa arched, at least distally, apex acute, termen oblique, smooth, usually rather straight, cell less than one-half, DC incurved, SC^1 from cell, free, SC^2 sometimes stalked to beyond SC^5, R^1 connate or short-stalked, M^1 usually short-stalked, sometimes connate or just separate; hindwing varied in shape, usually elbowed or tailed at R^3, never strongly elongate tornally, cell short to very short, DC somewhat curved, C anastomosing with cell at a point near base, rapidly diverging, SC^2 stalked, R^2 very characteristic, M^1 stalked. ♂ genitalia (section *Cosmogonia*) with uncus pointed, with socii of equal length, gnathos pointed, harpe with long, curved scobinated, clasper, vinculum with long lower arm, penis pestillate, with band of rounded cornuli; evidently related to *Hemithea*.

Fig. 14



Section of antenna of *Metallochlora* (*Cosmogonia*) *decorata*, Warren, ♂.

Early stages unknown.

Type of the genus : *Metallochlora meeki*, Warren.

Geographical distribution of species. — Oceania, ? Madagascar.

Section I. — Hindwing without long tail at R^3, no hyaline patch at base; forewing with SC^2 variable (*Metallochlora*, Warren) [1].

1 *M. meeki*, Warren. Fergusson Island.

Metallochlora meeki, Warren, Novit. Zool. Vol. 3, p. 291 (1896).

[1] Probably embraces two or three sections, but we have not the material for an exhaustive revision. In *tetralopha* and *lineata*, which also have their distinctive shape and coloration, SC^2 arises after SC^5; in the bright green *militaris*-group it is normal

2. *M. albicinctaria* (Walker). — Flores.
Geometra albicinctaria, Walker, List Lep. Ins. Brit. Mus. Vol. 35, p. 1604 (1866).
Nemoria albicinctaria, Swinhoe, Lep. Het. Oxford Mus. Vol. 2, p. 398, t. 6, f. 7 (1900).

3. *M. neomela* (Meyrick). — Tenimbers to Bismarck Archipelago, N. and W. Australia.
Iodis neomela, Meyrick, Trans. Ent. Soc. Lond. p. 492 (1889).
Nemoria pisina, Warren, Novit. Zool. Vol. 6, p. 26 (1899).
Thalassodes albolineata, Pagenstecher, Zoologica, Vol. 29, p. 156 (1900) (nov. syn.).
Hemithea pisina, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 35, p. 604 (1910).
Metallochlora neomela, Turner, ibidem, p. 653 (1910).

4. *M. militaris* (Lucas). — **Pl. 4, Fig. 10.** — N. and E. Australia, Ke Islands.
Iodis militaris, Lucas, Proc. Linn. Soc. N. S. Wales (2), Vol. 6, p. 295 (1891).
Metallochlora dotata, Warren, Novit. Zool. Vol. 3, p. 367 (1896).
Metallochlora flavifimbria, Warren, ibidem, p. 367 (1896).
Metallochlora militaris, Warren, ibidem, Vol. 5, p. 422 (1898).

5. *M. lineata*, Warren. — Fergusson and Trobriand Isl., Dutch New Guinea.
Metallochlora lineata, Warren, Novit. Zool. Vol. 3, p. 291 (1896).

6. *M. tenuilinea*, Warren. — Dutch New Guinea.
Metallochlora tenuilinea, Warren, Novit. Zool. Vol. 3, p. 368 (1896).

7. *M. differens*, Warren. — Tenimber.
Metallochlora differens, Warren, Novit. Zool. Vol. 4, p. 41 (1897).

8. *M. tetralopha* (Lower).
Euchloris (?) tetralopha, Lower, Proc. Linn. Soc. N. S. Wales, Vol. 23, p. 43 (1898).
Metallochlora tetralopha, Turner, ibidem, Vol. 35, p. 605 (1910).

9. *M. sanguinipuncta*, Warren. — Ke Islands.
Metallochlora sanguinipuncta, Warren, Novit. Zool. Vol. 6, p. 422, 425 (1901).

10. *M. proximata*, Warren. — Solomon Islands.
Metallochlora proximata, Warren, Novit. Zool. Vol. 6, p. 26 (1899).

11. *M. aurigera* (Pagenstecher). — Bismark Archipelago.
Euchloris aurigera, Pagenstecher, Zoologica, Vol. 29, p. 155 (1900).

12. *M. rubripuncta*, Warren. — Solomon Islands.
Metallochlora rubripuncta, Warren, Novit. Zool. Vol. 9, p. 355 (1902).

13. *M. circumscripta*, Warren. — Solomon Islands.
Metallochlora circumscripta, Warren, Novit. Zool. Vol. 11, p. 486 (1904).

14. *M. ametalla*, Turner. — N. Australia.
Metallochlora ametalla, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 35, p. 608 (1910).

15. *M. glacialis* (Butler) (huj. gen.?) 1). — Madagascar.
Thalassodes glacialis, Butler, Ann. Mag. Nat. Hist. (5), Vol. 5, p. 391 (1880).
Nemoria zebraea, Saalmüller, Lep. Madag. (2), p. 495, t. 14, f. 264 (1891) (nov. syn.).
Gelasma zebraea, Swinhoe, Trans. Ent. Soc. Lond. p. 545 (1904).
Iodis glacialis, Swinhoe, ibidem, p. 547 (1904).

SECTION II. — Hindwing with a hyaline patch at base; forewing with SC^2 arising after SC^5 (*Chrysomphe*, Warren; bon. gen.?).

16. *M. venusta* (Warren). — **Pl. 3, Fig. 18.** — Ceram, N. Australia, New Guinea, N. Australia, Bismarck Archipelago.
Chrysomphe venusta, Warren, Novit. Zool. Vol. 3, p. 365 (1896).
Thalera pudica, Pagenstecher, Zoologica, Vol. 29, p. 157, t. 2, f. 7 (1900) (nov. syn.).
Metallochlora venusta, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 35, p. 607 (1910).

1) Conforms to the characters here given, but had probably a different origin.

Section III. — Hindwing with a long tail at R^3; forewing with SC^2 arising before SC^5 (*Cosmogonia*, Warren; bon. gen.?).

17. *M. decorata* (Warren). — **Pl. 5, Fig. 4.** N. Queensland, Dutch New Guinea.

Thalerura (?) *decorata*, Warren, Novit. Zool. Vol. 3, p. 360 (1896).
Cosmogonia decorata, Warren, ibidem, Vol. 4, p. 210 (1897).
Metallochlora decorata, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 35, p. 606 (1910).

118. Genus UROLITHA, Meyrick

Urolitha. Meyrick, Proc. Linn. Soc. N. S. Wales (2), Vol. 2, p. 865 (1888).

Characters. — Face smooth. Palpus in ♂ moderate, in ♀ elongate, second joint scarcely rough-scaled, third joint smooth, in ♂ quite moderate, in ♀ long. Tongue present. Antenna in both sexes ciliated, in ♀ very minutely. Pectus somewhat hairy. Femora glabrous. Hindtibia in ♂ dilated with hair-pencil, in both sexes with all spurs. Abdominal crests slight, somewhat metallic, often wanting. Frenulum in ♂ rather short, from before basal expansion, in ♀ wanting. Forewing with costa gently arched, apex rather acute, termen straight, moderately oblique, tornus pronounced, cell less than one-half, DC slightly incurved, SC^1 free (or rarely anastomosing, with C — Turner), SC^2 normal, R^1 short-stalked or connate, M^1 short-stalked or connate; hindwing with apex prominent, termen long, straight, the wing much produced to tornus, inner margin long, cell less than one half, DC little oblique, C anastomosing at a point near base, rapidly diverging, SC^2 stalked, R^2 very characteristic, M^1 stalked.

Early stages unknown.

It is very doubtful whether this genus differs from *Metallochlora* more than does *Metallochlora* inter se. *M. albicinctaria* and *neomela* in part bridge over the gap in shape, leading on to the *militaris*-group, also with variable cresting.

Type of the genus : *Urolitha bipunctifera* (Walker) — *Iodis bipunctifera*, Walker.

Geographical distribution of species. — Australian.

1. *U. bipunctifera* (Walker). S. E. to E. Australia.

Iodis bipunctifera, Walker, List Lep. Ins. Brit. Mus. Vol. 22, p. 540 (1891).
Urolitha bipunctifera, Meyrick, Proc. Linn. Soc. N. S. Wales (2), Vol. 2, p. 866 (1888).

119. Genus MIXOLOPHIA, Warren

Mixolophia. Warren, Novit. Zool. Vol. 1, p. 391 (1894).

Characters. — Face smooth. Palpus in ♂ rather short, second joint with moderately appressed scales, third joint small (in *albiradiata* second joint rough-scaled, third moderate). Tongue present. Antenna in ♂ subserrate, shortly ciliated. Pectus moderately hairy. Femora glabrous. Hindtibia in ♂ (*albiradiata*) dilated with hair-pencil and four short spurs. Abdomen strongly crested (in type with curved tufts). Frenulum in ♂ moderately strong, from before basal expansion. Forewing with costa arched at base and distally, nearly straight between, termen oblique, little curved, subcrenulate, cell nearly one-half, DC incurved, SC^1 from cell, free, SC^2 normal, R^1 short-stalked, M^1 approximated; hindwing with termen subcrenulate, a prominent tooth at R^3, cell short, DC^3 incurved, C anastomosing very briefly with cell near base (in *albiradiata* merely approximated), rapidly diverging, SC^2 stalked, M^1 stalked.

Early stages unknown.

We have seen only one specimen of each species, that of *ochrolauta* with hindlegs lost. On account of their shape, etc., they are by no means certainly congeneric. Should *ochrolauta* prove to have only two spurs in the ♂, it might go with *Lophocrita*. The *aspect* is nearer that of *Uliocnemis*, etc., and altogether the position is still somewhat problematical.

Type of the genus : *Mixolophia ochrolauta*, Warren (1894).

Geographical distribution of species. — N. India.

1. *M. ochrolauta*, Warren. Bhutan.
   Mixolophia ochrolauta, Warren, Novit. Zool. Vol. 1, p. 391 (1894).
   Hemithea ochrolauta, Hampson, Fauna Ind. Moths, Vol. 3, p. 490 (1895).
2. *M. albiradiata* (Warren) (huj. gen.?). Assam.
   Uliocnemis albiradiata, Warren, Proc. Zool. Soc. Lond. p. 356 (1893).
   Hemithea albiradiata, Hampson, Fauna Ind. Moths, Vol. 3, p. 490 (1895).

120. Genus EPISOTHALMA, Swinhoe

Episothalma, Swinhoe, Ann. Mag. Nat. Hist. (6), Vol. 12, p. 149 (1893).
Chlorodontopera, sect. **Episophthalma**. Hampson, Fauna Ind. Moths, Vol. 3, p. 483 (1895).

Characters. — Face smooth, rounded. Palpus moderate, second joint shortly rough-scaled, third joint in ♂ rather small to moderate, in ♀ smooth, slender, moderate to long. Tongue developed. Antenna in ♂ dentate with fascicles of cilia, in ♀ nearly simple. Pectus and femora hairy. Hindtibia in ♂ sometimes dilated with hair-pencil, median spurs wanting or absolutely vestigial, in ♀ with all spurs usually present, but very variable in degree of development, the medians sometimes almost entirely obsolete. Abdomen with small crests. Frenulum in ♂ rather strong, from before slight basal expansion, in ♀ quite rudimentary. Forewing with costa very gently arched, more strongly so towards apex, apex acute, termen usually crenulate, slightly incurved below apex, prominent or even sharply toothed at R^3, thence very oblique, cell less than one-half. DC incurved, SC^1 free, SC^2 normal, R^1 connate or stalked, R^2 from rather near apex of cell, M^1 closely approximated to R^3, exceptionally very shortly stalked; hindwing with termen crenulate, a strong tooth at R^3 and another (often less strong) at R^1, more or less excised between, tornus pronounced, cell short, C very shortly appressed to or anastomosing with SC, then rapidly diverging, SC^2 stalked, R^2 from near apex of cell, M^1 approximated, connate or stalked. ♂ genitalia with uncus pointed, socii large, angular, gnathos not united, harpe with clasper in fold, penis pestillate, spatulate, long coremata present; suggesting an alliance with *Maxates*.

Early stages unknown.

It seems feasible to regard this genus as approximately parental to *Hemithea*, though certainly retaining some signs of affinity with the more primitive genera *Chlorodontopera*, etc.

Type of the genus : *Episothalma robustaria* (Guenée) = *Hemithea robustaria*, Guenée — *Thalassodes sisunaga*, Walker (1893).

Geographical distribution of species. — India to New Guinea.

1. *E. robustaria* (Guenée). India to Burma.
   Hemithea robustaria, Guenée, Spec. Gén. Lép. Vol. 9, p. 383 (1858).
   Thalassodes sisunaga, Walker, List Lep. Ins. Brit. Mus. Vol. 22, p. 550 (1861).
   Thalera robustaria, Walker, ibidem, p. 595 (1861).
   Thalassodes macruraria, Walker, ibidem, Vol. 26, p. 1561 (1862).
   Thalassodes fimbriaria, Walker, Char. Undescr. Lep. p. 97 (1869).
   Thalassodes indeterminata, Walker, ibidem, p. 98 (1869).

Episothalma sisunaga, Swinhoe, Ann. Mag. Nat. Hist. (6), Vol. 12, p. 150 (1893).
Chlorodontopera robustaria, Hampson, Fauna Ind. Moths, Vol. 3, p. 484 (1895).
Episothalma robustaria, Swinhoe, Lep. Het. Oxford Mus. Vol. 2, p. 388 (1900).

2. *E. ocellata*, Swinhoe. — Khasis.
Episothalma ocellata, Swinhoe, Ann. Mag. Nat. Hist. (6), Vol. 12, p. 218 (1893).
Chlorodontopera ocellata, Hampson, Fauna Ind. Moths, Vol. 3, p. 483 (1895).

3. *E. obscurata*, Warren. — Fergusson Island to Dutch New Guinea.
Episothalma obscurata, Warren, Novit. Zool. Vol. 3, p. 289 (1896).

4. *E. subaurata*, Warren. — New Guinea.
Episothalma subaurata, Warren, Novit. Zool. Vol. 6, p. 329 (1899).

5. *E. cognataria*, Swinhoe. — Siam.
Episothalma cognataria, Swinhoe, Ann. Mag. Nat. Hist. (7), Vol. 11, p. 510 (1903).

121. Genus LOPHOCRITA, Warren

Lophocrita. Warren, Novit. Zool. Vol. 1, p. 389 (1894).

Characters. — Face smooth. Palpus in ♂ rather short, second joint quite shortly rough-scaled beneath, third joint in ♂ small. Tongue present. Antenna in ♂ slightly subserrate, with fascicles of cilia. Pectus moderately hairy. Femora glabrous. Hindtibia in ♂ little dilated, but with a long slender pencil of hairs, median spurs wanting (no doubt present in ♀). Abdomen with strong curved crests. Frenulum in ♂ moderately strong, but arising from before a basal expansion of hindwing. Forewing with costa gently arched, almost straight between, apex rather prominent, termen smooth, slightly curved, strongly oblique, cell nearly one-half, DC incurved, SC^1 from cell, free, SC^2 normal, R^1 short-stalked, M^1 approximated; hindwing with termen slightly curved from apex to R^3, there weakly tailed, thence subcrenulate, tornus pronounced, inner margin long, cell short, DC^3 incurved, C anastomosing with cell at a point near base, then strongly diverging, SC^2 stalked, M^1 stalked.

Early stages unknown.

We have unfortunately seen no ♀ of this genus, but it appears to be so clearly a mere modification of *Hemithea*, distinguished by the much more highly developed crests, that we have no doubt the ♀ will prove to have all spurs present.

Type of the genus : *Lophocrita undifera* (Walker) = *Thalera undifera*, Walker (1894).

Geographical distribution of species. — Borneo.

1. *L. undifera* (Walker). — Borneo.
Thalera undifera, Walker, List Lep. Ins. Brit. Mus. Vol. 22, p. 601 (1861).
Lophocrita undifera, Warren, Novit. Zool. Vol. 1, p. 389 (1894).

122. Genus HEMITHEA, Duponchel

Hemithea. Duponchel, Hist. Nat. Lép. Vol. 7 (2), p. 106, 233 (1829).
Chlorochroma. Duponchel, Cat. Méth. Lép. Eur. p. 224 (1845).
? **Geometrina.** Motschulsky, Etud. Ent. Vol. 9, p. 35 (1860) 1).

1) Motschulsky's diagnosis makes it quite certain that he was not dealing with a species of *Megalochlora* (as Warren, *Novit. Zool.* Vol. 2, p. 89, assumes), and highly probable that he had a *Hemithea* before him. That he considered Bremer's very bad figure of *sponsaria* as similar to his own *viridescentaria* shows little or nothing.

Characters. — Face smooth. Palpus moderate to long, second joint shortly scaled, reaching beyond frons, third joint smooth, in ♂ quite moderate, in ♀ elongate. Tongue developed. Antenna in ♂ ciliated (typically dentate-fasciculate), in ♀ minutely ciliated. Pectus somewhat hairy. Femora glabrous (except hindfemur of ♂). Hindtibia in ♂ long, with strong sheath and hair-pencil, no appreciably process, median spurs wanting, terminals not long, hindtarsus abbreviated (**Fig. 15**); hindtibia in ♀ with all spurs. Abdomen with small or moderate crests. Frenulum in ♂ present, arising from before basal expansion, in ♀ wanting. Forewing with costa somewhat arched, apex moderate, termen smooth, slightly curved, oblique, cell less than one-half, SC^1 from cell, usually free, sometimes anastomosing with C, SC^2 normal, R^1 usually stalked, R^2 from above middle of cell, M^1 short-stalked, connate or closely approximated; hindwing with apex moderate, termen usually tailed or angled at R^3 (rarely only slightly bent), tornus pronounced, inner margin rather long, cell short, DC incurved, becoming rather oblique, C anastomosing with cell at a point near base, then rapidly diverging, SC^2 stalked, R^2 from considerably above middle of DC, M^1 short-stalked. ♂ genitalia : uncus pointed, with slender socii of equal length, gnathos almost atrophied, harpe with finely spined clasper, penis pestillate, short coremata present.

Fig. 15

Hindleg of *Hemithea aestivaria*, Hübner, ♂.

Egg. — Short oval, much flattened and with a large depression on upper side, slightly flattened at one end; surface shagreened; colour pale green (cf. *Ent. Rec.* Vol. 14, p. 246; Vol. 19, t. 9, f. 1).

Larva. — Thin and firm (twig-like), head bifid, prothorax with bifid anterior projection over head, body with decided lateral flange. In first instar with a number of club-shaped hairs and posteriorly on the dorsum of abdominal segments 1-5 a T-shaped hair, resembling that upon the dorsal area of *Hipparchus papilionaria;* no actual covering as in the *Comibaena*-group, but the habit prevalent of spinning threads about the body, to which becomes attached foreign matter such as dust and dirt. In later stadia the hairs become progressively less specialized, the « balloon-shaped » process which correponds to the special organ of *Comibaena* and *Euchloris* (whereby they attach their clothing) not very conspicuous (Burrows, *Ent. Rec.* Vol. 19, p. 278).

Pupa. — Rather slender, light brown, with dark dorsal line; cremaster with eight hooks, four fairly uniform at extremity and two pairs more dorsal and lateral a little before extremity. Loosely spun among leaves.

This genus and the following, though distinct in several characters in their typical forms, are so connected by intergrades that it is difficult to maintain them on a rigid classificatory system. All the strongly tailed or angled species (with the possible exception of *subflavida*, of which we have not access to an undamaged specimen) have also the crested abdomen, and this combination of characters furnishes the typical *Hemithea*. But a few with appreciably angled hindwing (*Chlorissa pretiosaria*, at least) have no sign of crests, while a few African forms with rounded hindwing (e. g. *dorsicristata*) are more or less well crested. The type species of *Chlorissa* has itself frequently two minute crests, and we have observed no instance, even in the African species, where the number is more than two. As there is no true (angled and fully crested) species of *Hemithea* known in Africa it seems quite clear that *dorsicristata* is a development of *Chlorissa* and we are compelled here to consider the wing-form as equally important with the cresting.

Type of the genus : *Hemithea aestivaria* (Hübner) = *Phalaena Geometra aestivaria*, Hübner (1829).

Geographical distribution of species. — Palæarctic, Indo-Australian.

1. *H. aestivaria* (Hübner). — Europe to E. Asia.

Phalaena Geometra strigata, Muller, Fauna Ins. Frid. p. 51 (1764) (nec Scopoli, 1763).
Phalaena vernaria ? Fabricius, Syst. Ent. p. 620, 1775; Meyer, Fuessly's Mag. Ent. Vol. 2, p. 34 (1770) (nec Linné).
Phalaena Geometra thymiaria (Schiffermuller), Schmett. Wien, p. 107 (1775) (nec Linné).
? *Phalaena herbacea* (Geoffroy), Fourcroy's Ent. Paris, (2), p. 282 (1785) (nom. dubium).
Phalaena Geometra aestivaria, Hubner, Beitr. Schmett. Vol. 1 (4), p. 22, t. 3, f. R (1789).
? *Phalaena Geometra bandaria*, Lang, Verz. Schmett. (ed. 2), p. 174 (1789) (nec Schiffermuller).
Geometra aestivaria, Hubner, Samml. Eur. Schmett., Geom. t. 2, f. 6 (1799); p. 10 (1800?).
Macaria thymiata Curtis, Brit. Ent. Vol. 3, p. 132 (1826).
Thalera thymiaria, Hubner, Verz. bek. Schmett. p. 285 (1820?).
Hemithea aestivaria, Duponchel, Hist. Nat. Lep. Vol. 7 (2), p. 100 (1824); Prout, Ent. Rec. Vol. 12, p. 182 (1900).
Ptychopoda thymiaria, Stephens, Cat. Brit. Ins. (2), p. 155 (1829).
Ptychopoda tenuaria, Stephens, ibidem, p. 153 (1829).
Chlorissa thymiaria, Stephens, Ill. Haust. Vol. 3, p. 310 (1831).
Chlorochlamia tenuaria, Duponchel, Cat. Meth. Lep. Eur. p. 224 (1845).
Nemoria fimbriata, Lederer, Verh. Zool.-bot. Ver. Wien, VIII, p. 172 (1853) (nec Hufnagel).
Thalera aestivaria, Stephens, List Brit. Anim. Brit. Mus. Vol. 5, p. 225 (1850).
Hemithea thymiaria, Guenee, Spec. Gen. Lep. Vol. 10, p. 384 (1858).
Nemoria strigata, Staudinger, Cat. (ed. 1), p. 63 (1861).
Hemithea strigata, Berce, Faune Ent. Fr. Lep. Vol. 5, p. 112 (1873).
? *Nemoria albiundulata*, Hedemann, Hor. Soc. Ent. Ross. Vol. 14, p. 511, t. 3, f. 8 (1879) ab.
Thalera strigata, Leech, Trans. Ent. Soc. Lond. p. 141 (1887).

2. *H. insularia*, Guenée (1). — Singapore to Philippines, ? India.

Hemithea insularia, Guenee, Spec. Gen. Lep. Vol. 10, p. 385 (1858).

3. *H. tritonaria* (Walker). — India and China to Java, Philippines.

Thalassodes tritonaria, Walker, List Lep. Ins. Brit. Mus. Vol. 20, p. 150 (1862).
Thalassodes leucospila, Hampson, Ill. Het. Coll. Brit. Mus. Vol. 9, p. 142, t. 170, f. 3 (1893) (nec Moore).
Hemithea tritonaria, Hampson, Fauna Ind. Moths, Vol. 3, p. 491 (1895).

4. *H. zuka* (Pagenstecher). — Bali to Woodlark Island, N. Australia.

Iodis zuka, Pagenstecher, Jahrb. Nassau. Ver. Nat. Vol. 39, p. 153 (1886).
Nemoria tosima, Meyrick, Trans. Ent. Soc. Lond. p. 495 (1889).
Hemithea pictifimbria, Warren, Novit. Zool. Vol. 3, p. 290 (1896).
Hemithea insularia, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 35, p. 964 (1910) (nec Guenee).

5. *H. viridescentaria* (Motschulsky) (huj. gen.?). — Japan.

Geometrina viridescentaria, Motschulsky, Etud. Ent. Vol. 9, p. 36 (1860).

6. *H. ussuriaria* (Bremer). — S. E. Siberia, E. China.

Iodes ussuriaria, Bremer, Mem. Acad. Sc. St-Petersb. Vol. 8, p. 77, t. 9, f. 24 (1864).
? *Hemithea albiundulata* (part.), Hampson, Fauna Ind. Moths, Vol. 4, p. 565 (1896) (nec Hedemann).
Nemoria ussuriaria Pungeler, Iris, Vol. 10, p. 302 (1898).
Hemithea ussuriaria, Staudinger, Cat. (ed. 3), p. 265 (1901).

1) A group of closely-allied species or forms, to which have been given the names of *insularia*, *tritonaria*, *zuka*, *tosima* and *pictifimbria*, is still in considerable confusion, and we have had neither the time nor the material to work it out thoroughly. The synonymy and distribution here given must consequently be regarded as merely provisional.

7. *H. distinctaria* (Walker). — N. India, Tibet.
Thalassodes distinctaria, Walker, List Lep. Ins. Brit. Mus. Vol. 35, p. 1607 (1866).
Hemithea subtritona, Warren, Novit. Zool. Vol. 1, p. 393 (1894).
Hemithea distincta, Warren, ibidem, p. 393 (1894).

8. *H. marina* (Butler). — Japan.
Thalassodes marina, Butler, Ann. Mag. Nat. Hist. (5), Vol. 1, p. 399 (1878).
Euchoris putata part., Meyrick, Trans. Ent. Soc. Lond. p. 65 (1892) (nec Linné).
Hemithea marina, Gumppenberg, Nova Acta Acad. Leop. d. Naturf. Halle, Vol. 64, p. 481 (1895).

9. *H. amphitritaria* (Oberthür). — E. Siberia, ? Japan, ? East China.
Nemoria amphitritaria, Oberthür, Diag. Lep. Askold, p. 8 (1879); Etud Ent. Vol. 5, p. 49, t. 4, f. 8 (1880).
? *Hemithea obliterata*, Leech, Ann. Mag. Nat. Hist. (6), Vol. 20, p. 233 (1897) (nec Walker).

10. *H. costipunctata* (Moore). — India with Ceylon, Burma.
Thalera costipunctata, Moore, Lep. Ceyl. Vol. 3, p. 428, t. 195, f. 4 (1887).
Thalera graminea, Hampson, Ill. Het. Coll. Brit. Mus. Vol. 8, p. 109, t. 151, f. 1 (1891).
Hemithea graminea, Hampson, Fauna Ind. Moths, Vol. 3, p. 491 (1895).
Hemithea costipunctata, Swinhoe, Lep. Het. Oxford Mus. Vol. 2, p. 392 (1900).

11. *H. rubripicta*, Warren. — N. India.
Hemithea rubripicta, Warren, Proc. Zool. Soc. Lond. p. 353 (1893).

12. *H. nigropunctata*, Warren. — N. India, ? Japan.
Hemithea nigropunctata, Warren, Proc. Zool. Soc. Lond. p. 353, t. 31, f. 4 (1893).
? *Nemoria amphitritaria*, Pungeler, Iris, Vol. 10, p. 362 (1898) (nec Oberthür).

13. *H. aquamarina*, Hampson. — N. India.
Omphax? marina, Butler, Ill. Het. Coll. Brit. Mus. Vol. 7, p. 21 (1889) (nec Ann. Mag. Nat. Hist. (5), Vol. 1, p. 399, 1878).
Hemithea aquamarina Hampson, Fauna Ind. Moths, Vol. 3, p. 491 (1895).
Hemithea unicolor, Warren, MS. in coll. Brit. Mus.

14. *H. subflavida*, Warren. — Fergusson Island, New Guinea.
Hemithea subflavida, Warren, Novit. Zool. Vol. 3, p. 290 (1896).
Hemithea subflavida reducta, Warren, ibidem, p. 367 (1896).
Lophyritis undivera part., Swinhoe, Trans. Ent. Soc. Lond. p. 672 (1902) (nec Walker).

15. *H. quadripunctata*, Warren. — Dutch Timor.
Hemithea quadripunctata, Warren, Novit. Zool. Vol. 3, p. 367 (1896).

16. *H. unilinearia*, Leech. — W. China.
Hemithea unilinearia, Leech, Ann. Mag. Nat. Hist. (6), Vol. 20, p. 232 (1897).

17. *H. pellucidula* (Turner). — N. Queensland.
Nemoria pellucidula, Turner, Trans. Roy. Soc. S. Austral. Vol. 30, p. 129 (1906).
Hemithea pellucidula, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 35, p. 604 (1910).

Note. — *Hemithea tacita*, Swinhoe, *Trans. Ent. Soc. Lond.* 1902, p. 671 (*Nemoria tacita* on type label) belongs to the *Acidalinae*.

123. Genus ANOPLOSCELES, Warren

Anoplosceles, Warren, Novit. Zool. Vol. 3, p. 363 (1896).

Characters. — Face smooth. Palpus in ♂ moderately long, second joint rather shortly scaled, third joint smooth, elongate (♀ unknown). Tongue present. Antenna in ♂ thick, lamellate, scarcely

[1] The locality was by inadvertence published as « Cedar Bay, Queensland », according to the type label, which is certainly correct as stated — Humphrey Bay, New Guinea. Swinhoe (*Trans. Ent. Soc. Lond.* 1902, p. 672) has corrected this point without comment.

ciliated. Pectus somewhat hairy. Hindtibia in ♂ dilated with hair-pencil, all spurs wanting (in ♀ ?); hindtarsus in ♂ short. Abdomen apparently not crested. Frenulum in ♂ slender, from before basal expansion. Forewing with costa arched, apex prominent, termen smooth, oblique, curved, cell about two-fifths, DC incurved, SC^1 from cell, anastomosing shortly with C, SC^2 normal, R^1 separate, R^2 from above middle, M^1 approximated at origin to R^3; hindwing with apex moderate, termen produced to a tail at R^3; tornus pronounced, cell short, C anastomosing at a point near base, SC^2 stalked, R^2 from much above middle, M^1 stalked.

Early stages unknown.

An evident offshoot of *Hemithea*.

Type of the genus : *Anoplosceles nigripunctata*, Warren.

Geographical distribution of species. — Java.

1. *A. nigripunctata*, Warren. W. Java.
Anoplosceles nigripunctata, Warren, Novit. Zool. Vol. 3, p. 363 1896

124. Genus CHLORISSA, Stephens

Chlorissa. Stephens, Ill. Haust. Vol. 3, p. 315 (1831); Westwood, Classif. Ins. Gen. Synopsis, p. 100 (1840).

Nemoria. Lederer, Verh. Zool.-bot. Ver. Wien, Vol. 3, p. 172 (1853) (nec Hübner, Moore restr.).

Phaiogramma. Gumppenberg, Nova Acta Acad. Leop. d. Naturf. Halle, Vol. 49, p. 326 (1887); Vol. 65, p. 277 (1896).

Characters. — Face smooth. Palpus quite moderate to long, second joint shortly rough-scaled, third joint in ♂ usually small, in ♀ quite moderate (the type species, etc.) to long (*pulmentaria*, etc.), rather short in the American species. Tongue present. Antenna in ♂ ciliated (usually evenly), in ♀ minutely ciliated. Pectus somewhat hairy. Femora glabrous. Hindtibia in ♂ elongate, with sheath and hair-pencil, and two short terminal spurs (medians wanting); in ♀ with all spurs. Abdomen without or (especially in the African species) with two small dorsal crests. Frenulum in ♂ slender, from before basal expansion, in ♀ wanting. Forewing with costa gently arched, apex moderate, termen smooth, nearly straight or slightly curved, moderately oblique, cell rather short, DC incurved, SC^1 usually from cell (stalked in *dorsicristata* and *afflictaria*, and sometimes in *unilinea*?), usually free, occasionally anastomosing with C, SC^2 normal, R^1 connate or very shortly stalked, M^1 connate or very shortly stalked, exceptionally just separate; hindwing with termen weakly elbowed or quite rounded, very rarely with a definite angle, never tailed, cell short, DC somewhat incurved, C anastomosing with cell at a point near base, then rapidly diverging, SC^2 stalked, R^2 characteristic, M^1 stalked (except sometimes in the American species). ♂ genitalia : uncus pointed, with slender socii of equal length (in *pulmentaria* larger, bird's-head-shaped), gnathos almost atrophied, harpe rounded, typically with long clubbed scales and with a strong, angulated, scobinated projection on the inner margin; penis pestillate, widened above, with large striated cornulus (minute cornuli in *pulmentaria*); a pointed scobinated projection of the termination of the eighth sternite.

Egg. — Elliptical, flattened above and below; surface in *viridata* with hexagonal pattern, in *subcroceata* smooth, finely shagreened; green, changing to yellowish (Burrows, *Ent. Rec.* Vol. 20, p. 131, t. 10, f. 1, 1*a*; Dyar, *Psyche*, Vol. 8, p. 386).

Larva. — Rather slender, twig-like, surface granulated, lateral flange present, but less developed than in *Hemithea*, etc.; setæ in the earliest stages short and club-shaped, no specialized hairs such as those of *Comibaena*, *Hipparchus* or even *Hemithea*. Head and prothorax bifid, scarcely appreciably in first stadium (Burrows, *Ent. Rec.* Vol. 20, p. 134; cf. Dyar on *subcroceata*, loc. cit.).

Pupa. — Rather truncated in front, but slender and pointed behind; colour dull pale ochreous, head and wing-cases dusky, a dark line down the back, spiracles black (Hellins, *Ent. M. Mag.* Vol. 1, p. 263).

Type of the genus : *Chlorissa viridata* (Linné) = *Phalaena Geometra viridata*, Linné (1840).

Geographical distribution of species. — Palæarctic, Nearctic, India, Africa.

1. *C. viridata* (Linné). — Europe to Central Asia, ?E. Asia.

Phalaena Geometra viridata, Linné, Syst. Nat. (ed. 10), p. 523 (1758).
Phalaena volutata, Fabricius, Syst. Ent. p. 635 (1775) 1).
?*Phalaena syrene* [Geoffroy], Fourcroy's Ent. Paris, p. 286 (1785) (nov. syn.).
Geometra viridaria, Hübner, Samml. Eur. Schmett. Geom. t. 2, f. 11 (1706?); p. 16 (1800?).
Geometra vernaria, Haworth, Lep. Brit. (2), p. 300 (1809) (nec Linné).
Nemoria viridaria, Hübner, Verz. bek. Schmett. p. 285 (1826?).
Hipparchus viridatus, Stephens, Cat. Brit. Ins. (2), p. 122 (1829).
Hemithea viridaria, Duponchel, Hist. Nat. Lép. Vol. 7 (2), p. 246, t. 151, f. 4 (1829).
Macaria viridata, Curtis, Guide Brit. Ins., col. 165 (1831).
Chlorissa viridata, Stephens, Ill. Haust. Vol. 3, p. 316 (1831).
Chlorissa cloraria, Stephens, ibidem, p. 316 (1831) (nec Hübner).
Nemoria viridata, Lederer, Verh. Zool.-bot. Ver. Wien, Vol. 3, p. 172 (1853).
[*Geometra*] *prasinata*, Werneburg, Beitr Schmett. Vol. 1, p. 225 (1864).
Nemoria viridata ab. *mathewi*, Bankes, Ent. Rec Vol. 19, p. 210 (1907) (ab.?).
Nemoria viridata ab. *rufotincta*, Burrows, ibidem, Vol 20, p. 132 (1908) (ab.?).
Nemoria viridata ab. *olivaceo-marginata*, ab. *concavilinea* et ab. *caerulescens*, Burrows, ibidem, p. 132 (1908) (aberr.).
Nemoria viridata ab. *rosearia*, Culot, Bull. Soc. Ent. Fr. p. 270 (1910) (ab.?).

2. *C. melinaria* (Herrich-Schäffer) (præc. var. vel syn.?). — Ural.

?*Hemithea herbaria*, Boisduval, Gen. Ind. Meth. Eur. Lep. p. 180 (1840) (nec Hübner) 2).
Geometra cloraria, Eversmann, Fauna Lep. Volg. Ural. p. 367 (1844) (teste Herrich-Schäffer) (nec Hübner).
Geometra melinaria, Herrich-Schäffer, Syst. Bearb. Schmett. Eur. Vol. 3, t. 67, fr. 413 (1848); Vol. 6, p. 63 (1852).

3. *C. cloraria* (Hübner). — Central and S. Europe (to Turkestan?).

Geometra cloraria, Hübner, Samml. Eur. Schmett. t. 68, f. 352 (1808?).
Geometra porrinata, Zeller, Stett. Ent Zeit. Vol. 9, p. 273 (1848) (nov. syn.).
[*Geometra*] *etruscaria* (part), Zeller, ibidem, Vol. 10, p. 203 (1849) 3).
Geometra porrinaria, Herrich-Schäffer, Syst. Bearb. Schmett. Eur. Vol. 6, p. 63 (1852); t. 91, f. 566 (1855).
Nemoria porrinata, Lederer, Verh. Zool.-bot. Ver. Wien, Vol. 3, p. 172 (1853).
Nemoria prasinata, Walker, List Lep. Ins. Brit. Mus. Vol. 26, p. 1556 (1862) (in err. pro *porrinata*).
Nemoria porrinata ab. *rosea*, Gumppenberg, Nova Acta Acad. Leop. d. Naturf. Halle, Vol. 64, p. 492 (1895) (ab.?).

4. *C. solidaria* (Guenée). — India with Ceylon, ? Abyssinia.

Nemoria solidaria, Guenée, Spec. Gén. Lép. Vol. 9, p. 348 (1858).
Iodis discessa, Walker, List Lep. Ins. Brit. Mus. Vol. 22, p. 544 (1861).

1) Vide *Ent. Rec.* Vol. 12, p. 180; « seticornis » in the Fabrician description supports the determination of Borkhausen against the later ones.
2) Suggested by Guenée (*Spec. Gén. Lep.* Vol. 9, p. 347, 350) on the evidence of coll. Boisduval. But the last-named author gives « Galloprov. » as locality.
3) Vide Zeller, *Stett. Ent. Zeit.* Vol. 33, p. 56.

Nemoria lataria, Walker, ibidem, Vol. 26, p. 1558 (1862).
Nemoria frequens, Butler, Proc. Zool. Soc. Lond. p. 616 (1881).
Nemoria parvulata, Swinhoe, ibidem, p. 854 (1885) nec Walker.

5. *C. pulmentaria* (Guenée). — S. Europe to Central Asia, N. Africa.
Hemithea cloraria, Duponchel, Hist. Nat. Lép. Vol. 8 (1), p. 549, t. 210, f. 1 (1830) (nec Hubner).
Geometra etruscaria (part.), Zeller, Stett. Ent. Zeit. Vol. 10, p. 203 (1849) (1).
Nemoria cloraria, Lederer, Verh. Zool.-bot. Ver. Wien, Vol. 3, p. 172 (1853).
Nemoria pulmentaria, Guenée, Spec. Gén. Lép. Vol. 9, p. 349 (1858).
? *Nemoria viridata* var. *insignata*, Staudinger, Cat. (ed. 3), p. 263 (1901).
? *Nemoria pulmentaria* var. *palaestinensis* (part.), Fuchs, Soc. Ent. Zurich, Vol. 18, p. 51 (1903).

6. *C. obliterata* (Walker). — E. China, Japan.
Nemoria obliterata, Walker, List Lep. Ins. Brit. Mus. Vol. 20, p. 1558 (1862).
? *Nemoria viridata* (part.), Staudinger, Iris, Vol. 10, p. 9 (1897); *viridaria* (part.), Leech, Ann. Mag. Nat. Hist. (6), Vol. 20, p. 240 (1897) (nec Linné).

7. *C. attenuata* (Walker). — Cape.
Nemoria(?) *attenuata*, Walker, List Lep. Ins. Brit. Mus. Vol. 20, p. 1558 (1862).
? *Iodis reductata*, Walker, ibidem, Vol. 35, p. 1606 (1866).
? *Nemoria attennata*, Warren, Novit. Zool. Vol. 4, p. 42 (1897).

8. *C. faustinata* (Millière) 2). — Spain, Syria, ? Egypt.
Nemoria faustinata, Millière, Ann. Soc. Linn. Lyon (n. s.), Vol. 17, p. 26, t. 96, f. 2-8 (1869).
Phaiogramma faustinata, Gumppenberg, Nova Acta Acad. Leop. d. Naturf. Halle, Vol. 65, p. 278 (1896).
Nemoria pulmentaria var. *palaestinensis* (part.?), Fuchs, Soc. Ent. Zurich, Vol. 18, p. 51 (1903) (nov. syn.; teste Pungeler in litt.).

9. *C. pretiosaria* (Staudinger). — N. W. India and W. China to Ferghana and Transcaucasia.
Nemoria pretiosaria, Staudinger, Stett. Ent. Zeit. Vol. 38, p. 202 (1877).
Nemoria gelida, Butler, Ill. Het. Coll. Brit. Mus. Vol. 7, p. 21, 104, t. 136, f. 5 (1889) (nov. syn.).
Nemoria pretiosaria var. *gigantaria*, Staudinger, Iris, Vol. 5, p. 143 (1892).
Hemithea (?) *anomala*, Warren, Novit. Zool. Vol. 3, p. 100 (1896).

10. *C. stibolepida* (Butler). — W. Africa to Natal and Madagascar.
Comibaena stibolepida, Butler, Cist. Ent. Vol. 2, p. 394 (1879).
? *Nemoria pallidularia*, Mabille, Ann. Soc. Ent. Fr. (5), Vol. 9, p. 333 (1880) (nov. syn.).
Hemithea albistrigulata, Warren, Novit. Zool. Vol. 4, p. 39 (1897).
Nemoria albistrigulata, Warren, ibidem, Vol. 5, p. 235 (1898) (nov. syn.).
Iodis stibolepida, Swinhoe, Trans. Ent. Soc. Lond. p. 547 (1904).

11. *C. confusaria* (Staudinger) (huj. gen.?). — E. Siberia.
[*Nemoria*] *confusaria*, Staudinger, Iris, Vol. 5, p. 144 (1892); Vol. 10, p. 10 (1897).

12. *C. punctifimbria* (Warren). — Bombay.
Hemithea (?) *punctifimbria*, Warren, Novit. Zool. Vol. 3, p. 366 (1896).

13. *C. approximans* (Warren). — Natal, Mashonaland.
Hemithea approximans, Warren, Novit. Zool. Vol. 4, p. 39 (1897).
Nemoria approximans, Warren, ibidem, Vol. 5, p. 235 (1898).

14. *C. malescripta* (Warren). — Natal, ? British E. Africa.
Hemithea malescripta, Warren, Novit. Zool. Vol. 4, p. 40 (1897).
Nemoria malescripta, Warren, ibidem, Vol. 5, p. 235 (1898).

15. *C. simplex* (Warren) (gen. *Hemithea*?). — Java, Sumatra.
Hemithea simplex, Warren, Novit. Zool. Vol. 4, p. 40 (1897).
Nemoria simplex, Warren, ibidem, Vol. 5, p. 235 (1898).
Iodis pariciliata, Fuchs, Jahrb. Nassau. Ver. Nat. Vol. 55, p. 86 (1902) (nov. syn.) 3).

1) See footnote to No. 5, supra.
2) This species, *solidaria* and *stibolepida*, are evidently very close relatives, possibly even forms of one widely-spread species.
3) Published as « *Iodis* (*Nemoria* vel potius *Hemithea*?) *pariciliata* ».

16. *C. unilinea* (Warren) (ead. ac *attenuata*?). — Cape to Mashonaland.
Hemithea unilinea, Warren, Novit. Zool. Vol. 4, p. 40 (1897).
Nemoria unilinea, Warren, ibidem, Vol. 5, p. 235 (1898).

17. *C. vermiculata* (Warren). — Niger.
Hemithea vermiculata, Warren, Novit. Zool. Vol. 4, p. 41 (1897).
Nemoria vermiculata, Warren, ibidem, Vol. 5, p. 235 (1898).

18. *C. afflictaria* (Swinhoe). — Sierra Leone.
Nemoria afflictaria, Swinhoe, Trans. Ent. Soc. Lond. p. 549 (1904).

19. *C. dorsicristata* (Warren). — Natal.
Nemoria dorsicristata, Warren, Novit. Zool. Vol. 12, p. 34 (1905).

20. *C. pistasciaria* (Guenée). — Eastern U. S. A.
Nemoria (?) *pistasciaria*, Guenée, Spec. Gén. Lép. Vol. 9, p. 348 (1858).
? *Acidalia* (?) *insecutata*, Walker, List Lep. Ins. Brit. Mus. Vol. 26, p. 1613 (1862) (nov. syn.) [1].
Thalera superata, Walker, ibidem, Vol. 35, p. 1612 (1866).
Nemoria pistaciata, Packard, Mem. Geom. U. S. A. p. 374, t. 10, f. 80 (1876).
Nemoria pistacearia, Hulst, Ent. News, Philad. Vol. 6, p. 71 (1895).
Chlorochroma pistaceata, Gumppenberg, Nova Acta Acad. Leop. d. Naturf. Halle, Vol. 64, p. 495 (1895).
Nemoria pistaceata, Dyar, Bull. U. S. Nat. Mus. No. 52, p. 299 (1902).

21. *C. euchloraria* (Guenée) (huj. gen. ?). — Eastern U. S. A.
Iodis euchloraria, Guenée, Spec. Gén. Lép. Vol. 9, p. 355 (1858).

22. *C. subcroceata* (Walker). — Eastern U. S. A.
Nemoria subcroceata, Walker, List Lep. Ins. Brit. Mus. Vol. 26, p. 1557 (1862).
Chlorochroma incertata var. *subcroceata*, Gumppenberg, Nova Acta Acad. Leop. d. Naturf. Halle, Vol. 64, p. 495 (1895).
Nemoria auranticolorata, Strecker, Lep. Het. Suppl. 2, p. 8 (1899) (nov. syn.).
? *Nemoria dyarii*, Hulst, The Canad. Entom. Vol. 32, p. 105 (1900) (nov. syn.).
Eucrostis incertata, Holland, Moth Book, p. 336, t. 43, f. 18 (1903) (nec Walker).

Note. — *Nemoria unifasciata*, Druce, *Biol. Centr. Amer. Lep. Het.* Vol. 2, p. 535, belongs to the *Geometrinae (Boarmiinae*, auctt.); *N. brunneifrons*, Hampson, *Trans. Zool. Soc. Lond.* Vol. 19 (2), p. 126, to the *Acidaliinae*.

125. Genus MESOTHEA, Warren

Mesothea. Warren, Novit. Zool. Vol. 8, p. 446 (1901).
Eucrostis. Hulst, Trans. Amer. Ent. Soc. Vol. 23, p. 313 (1896) (nec *Eucrostes*, Hübner).

Characters. — Face somewhat rough-scaled. Eye small. Palpus in both sexes short, second joint with long rough scaling, third joint small, concealed. Tongue present. Antenna about one-half, in ♂ dentate, with fascicles of cilia, in ♀ nearly simple. Pectus densely hairy. Femora hairy. Hindtibia in ♂ not dilated, in both sexes with terminal spurs only. Abdomen not crested. Frenulum in ♂ weak and colourless, arising from before basal expansion, in ♀ wanting. Forewing with costa slightly arched at base, then nearly straight, apex moderate, termen smooth, slightly curved, oblique, tornus somewhat rounded off, cell not quite one-half, DC incurved, SC^1 from cell, anastomosing with C or free (variable in both species), SC^2 normal, occasionally anastomosing with SC^1, R^1 connate, short-stalked or approximated, M^1 separate; hindwing with termen usually slightly bent at R^3, cell less than one-half,

1) The type without locality; agrees very well with *pistasciaria*, only M^1 of hindwing is stalked (about connate in our only *pistasciaria*).

DC incurved, C anastomosing at a point with cell, then rapidly diverging, SC^2 stalked, M^1 connate or short-stalked.

Egg. — Elliptical, disk-like, flattened concave above and below with sharp edges, one end a little more rounded-pointed than the other, narrower; smooth and shining, with small, narrow and obscure reticulations (Dyar, *Psyche*, Vol. 9, p. 287).

Larva. — Slender, cylindrical, head strongly bilobed, the lobes produced into erect conical horns, prothorax produced anteriorly into similar but smaller cones, skin-surface finely granulated, tubercles and setæ very small in first instar, becoming obsolete, anal plate pointed, anal legs extended laterally with large plates (Dyar, loc. cit., complete description of *viridipennata* in its five stages).

Pupa. — Apparently undescribed; enclosed in a cocoon of a few strands of silk between leaves (Dyar, loc. cit.).

A very distinct genus, though probably related to *Chlorissa*, especially its American representatives.

Type of the genus : *Mesothea incertata* (Walker) — *Nemoria incertata*, Walker (1001).

Geographical distribution of species. — Nearctic

1. *M. incertata* (Walker). Eastern N. America.
   Nemoria incertata, Walker, List Lep. Ins. Brit. Mus. Vol. 20, p. 155 (1862).
   Nemoria sporaria, Zeller, Verh. Zool.-bot. Ges. Wien, Vol. 22, p. 481 (1872).
   Nemoria grotata (Walker, MS.) Packard, Mon. Geom. U. S. A., p. 373, t. 10, f. 70 (1876).
   Chlorochroma grotata, Gumppenberg, Nova Acta Acad. Leop. d. Naturf. Halle, Vol. 64, p. 494 (1895).
   Chlorochroma incertata, Gumppenberg, ibidem, p. 495 (1895).
   Eucrostis incertata, Hulst, Trans. Amer. Ent. Soc., Vol. 23, p. 315 (1896).
   Mesothea incertata, Warren, Novit. Zool., Vol. 8, p. 440 (1901).
2. *M. viridipennata* (Hulst). Western N. America.
   Eucrostis viridipennata, Hulst, Trans. Amer. Ent. Soc., Vol. 23, p. 315 (1896).

126. Genus CHLOROCHLAMYS, Hulst

Chlorochlamys. Hulst, Trans. Amer. Ent. Soc. Vol. 23, p. 312 (1896).

Characters. — Face smooth. Palpus rather long, at least in ♀, second joint moderately rough-scaled, third joint smooth, in ♂ quite moderate, in ♀ long. Tongue present. Antenna moderate, in ♂ bipectinate with long branches, apical part merely serrate; in ♀ nearly simple. Pectus somewhat hairy. Femora glabrous. Hindtibia in ♂ dilated with hair-pencil, median spurs wanting, in ♀ with all spurs. Hindtarsus in ♂ short. Abdomen not crested. Frenulum in ♂ very slender, arising from before basal expansion; in ♀ rudimentary. Forewing with costa somewhat arched, apex moderate, termen smooth, oblique, gently curved, cell not quite one-half, DC incurved, SC^1 from cell, usually anastomosing with C, SC^2 normal, R^1 connate or short-stalked, M^1 connate or short-stalked; hindwing with termen rounded or very weakly excised between R^1 and R^3, cell rather less than one-half, DC incurved, C anastomosing at a point near base, rather rapidly diverging, SC^2 stalked, M^1 stalked.

Larva. — Head small, subquadrate, deeply bifid, prothorax with two small anterior dorsal projections, body thickest behind, much attenuated anteriorly. Feeds on various flowers (Goodell, *The Canad. Entom.* Vol. 12, p. 235; Hulst, *Bull. Brooklyn Ent. Soc.* Vol. 2, p. 781.

Pupa. — Light brown of varying shade, irregularly black-spotted and with black dorsal line; in slight cocoon among leaves (Goodell and Hulst, in loc. cit.).

Evidently a New-World development of *Chlorissa*, differing little, except in the antenna.

Type of the genus : *Chlorochlamys chloroleucaria* (Guenée) = *Nemoria chloroleucaria*, Guenée (1896).

Geographical distribution of species. — North America.

1. *C. chloroleucaria* (Guenée). — Canada, U. S. A.
   Nemoria chloroleucaria, Guenée, Spec. Gen. Lép. Vol. 9, p. 351 (1858).
   Nemoria indiscriminata, Walker, List Lep. Ins. Brit. Mus. Vol. 26, p. 1556 (1862).
   Nemoria (?) densaria, Walker, ibidem, p. 1557 (1862).
   Thalassodes deprivata, Walker, ibidem, p. 1559 (1862).
   Eucrostis rectilinea, Zeller, Verh. Zool.-bot. Ges. Wien, Vol. 22, p. 480 (1872) (nov. syn.; sec. specim. typ.).
   Eucrostis chloroleucaria, Packard, Mon. Geom. U. S. A. p. 370, t. 10, f. 77 (1876).
   Euchrostes chloroleucaria, Gumppenberg, Nova Acta Acad. Leop. d. Naturf. Halle, Vol. 64, p. 488 (1895).

2. *C. phyllinaria* (Zeller). — Texas to Arizona.
   Eucrostis phyllinaria, Zeller, Verh. Zool.-bot. Ges. Wien, Vol. 22, p. 479 (1872).
   Chlorochlamys vertaria, Pearsall, The Canad. Entom. Vol. 40, p. 197 (1908) (nov. syn.).

3. *C. zelleraria* (Packard). — Texas, New Mexico.
   Eucrostis zelleraria, Packard, Mon. Geom. U. S. A. p. 370, t. 10, f. 76 (1876).
   Nemoria phyllinaria, Hulst, Ent. News, Philad. Vol. 6, p. 71 (1895) (nec Zeller).
   Chlorochlamys phyllinaria, Hulst, Trans. Amer. Ent. Soc. Vol. 23, p. 313 (1896).

4. *C. masonaria* (Schaus). — Arizona to Costa Rica.
   Nemoria masonaria, Schaus, Journ. New York Ent. Soc. Vol. 5, p. 101 (1897).
   Chlorochlamys volantaria, Pearsall, Sc. Bull. Brooklyn Inst. Mus. Vol. 1 (8), p. 214 (1906) (var. ?).
   Gelasma masonaria, Dyar, Proc. Ent. Soc. Wash. Vol. 10, p. 34 (1908).

5. *C. inveterascaria*, Swett. — Arizona.
   Chlorochlamys inveterascaria, Swett, The Canad. Entom. Vol. 39, p. 379 (1907).

6. *C. appellaria*, Pearsall. — Arizona.
   Chlorochlamys appellaria, Pearsall, The Canad. Entom. Vol. 43, p. 206 (1911).

7. **C. curvifera, nov. sp.** 1), Prout. — Arizona.

8. **C. triangularis, nov. sp.** 2), Prout. — California.

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1) **Chlorochlamys curvifera, nov. sp.** — ♀, 20 mm. Face green (abraded, but a few green scales remaining on upper part). Palpus deep ochreous, third joint quite moderate, partly concealed by projecting scales of second joint. Vertex greenish white. Thorax green above, abdomen paler. Fore- and middle-legs largely deep ochreous. Forewing slightly more elongate than in the type; SC^1 anastomosing strongly with (or apparently running into) C; somewhat bluish green, costal edge very narrowly pale ochreous; lines slender, whitish ochreous, each forming a regular, gentle curve, the antemedian from costa at one-third, the postmedian at somewhat beyond two-thirds, fringe green in proximal half, whitish ochreous in distal. Hindwing with termen rounded, inner margin less long than in type-species, without antemedian line; postmedian slightly more sinuous than on forewing. Underside paler, especially of hindwing; antemedian line wanting, postmedian barely traceable. Phœnix, Arizona, 7th September, 1904 (R. E. Kunze). Type in coll. Brit. Mus.

2) **Chlorochlamys triangularis, nov. sp.** — ♀, 24 mm. Face, palpus and legs deep, bright ochreous. Palpus at least as long as in *chloroleucaria*, stouter, with long strong terminal joint. Vertex pale green, tinged with ochreous between the antennæ; antenna pale ochreous. Thorax green above, abdomen rather paler. Forewing with apex slightly more acute than in *chloroleucaria*, termen rather straight, oblique; SC^1 free; light olive green, costal edge narrowly deep ochreous; lines at one-third and two-thirds, fine, pale ochreous, slightly curved and very slightly sinuous; fringe green, very indistinctly chequered, the darker patches being opposite the vein-ends. Hindwing with termen somewhat sinuous, straight or almost incurved from R^1 to R^3, appreciably bent at R^3; antemedian line absent, postmedian slightly sinuous, very slightly bent at R^3, thence rather more oblique, reaching inner margin at about three-fourths. Underside paler, especially of hindwing, postmedian faintly discernible on forewing. Head of Noyo, Mendocino County, California, collected (8-11 June, 1871) and presented by Lord Walsingham. Type in coll. Brit. Mus. A worn ♂ (smaller) from the same collection, and no doubt of the same species, has the lines nearer together, and shows the antennal pectinations to be slightly shorter than in *chloroleucaria*.

Note. — A specimen of *Chlorochlamys* from the Godman collection, included by Druce (*Biol. Centr. Amer. Lep. Het* Vol 2, p. 94) among *Amaurinia simplicearia*, Walker, is too worn to determine or describe, but is evidently not *masonaria*, the only species of the genus yet recorded from Central America. Its locality is Volcan de Atitlan.

127. Genus CHLOROPTERYX, Hulst

Chloropteryx. Hulst, Trans. Amer. Ent. Soc. Vol. 23, p. 314 (1896).
Hypnochlora. Schaus, Journ. New York Ent. Soc. Vol. 5, p. 161 (1897) (indescr.).

Characters. — Face smooth, rather narrow. Palpus slender, third joint in both sexes smooth and exposed, in ♂ (of type species) about half as long as second joint, in ♀ long to very long. Tongue present. Antenna in ♂ bipectinate (except in *decipiens*); the branches long, ceasing rather abruptly, apical portion (about fifteen joints in type species) merely serrate; in ♀ nearly always nearly simple or at most dentate, very shortly ciliated 1). Pectus slightly hairy. Femora glabrous. Hindtibia in ♂ long, with ensheathed hair-pencil and nearly always with a short terminal process, median spurs wanting, tarsus abbreviated; hindtibia in ♀ with all spurs. Abdomen not crested. Frenulum in ♂ moderately long, but slender, arising before basal expansion; in ♀ wanting. Wings often thinly scaled, more or less iridescent. Forewing with costa slightly arched, apex moderate to rather acute, termen straight or slightly curved, cell rather less than one-half, DC^3 inbent, SC^1 stalked with $SC^{2\text{-}5}$ (or from close to their base), usually anastomosing with C, SC^2 normal, R^1 usually stalked, M^1 connate, stalked or approximated; hindwing elongate, angled or tailed at R^3, tornus pronounced, inner margin long, cell rather short, DC^3 oblique posteriorly, C anastomosing with SC at a point near base, rapidly diverging, SC^2 stalked, M^1 stalked.

Early stages unknown.

This genus bears almost the same relationship to *Chlorochlamys* as *Hemithea* does to *Chlorissa*, being distinguished chiefly by the angulated hindwing. The frequent stalking of SC^1 of the forewing and the usual better development of the ♂ hindtibial process are supplementary characters, but they are inconstant, and it is possible that the genera, distinct enough in their typical forms, will prove to intergrade. We are indebted to Dr. Harrison G. Dyar and Mr. R. F. Pearsall for the generic characters of the type species, which, however, is very closely related to some well-known South American species.

Type of the genus : *Chloropteryx tepperaria*, Hulst (1896).

Geographical distribution of species. — Neotropical, with one species in the Southern United States.

1. *C. tepperaria* (Hulst). — N. Carolina to Florida.
   Nemoria tepperaria, Hulst, Ent. Amer. Vol. 2, p. 122 (1886).
   Chloropteryx tepperaria, Hulst, Trans. Amer. Ent. Soc. Vol. 23, p. 314 (1896).
2. *C. productaria* (Herrich-Schäffer). — Brazil (?).
   Thalera productaria Herrich-Schäffer, Samml. Aussereur. Schmett. Vol. 1, t. 61, f. 342 (1855); p. 30 (1856).
   Iodis productaria, Guenée, Spec. Gén. Lép. p. 357 (1858).
3. *C. clemens* (Warren) (præc. var.?). — Mexico to Ecuador and Guianas.
   Iodis productaria (part.), Druce, Biol. Centr. Amer. Lep. Het. Vol. 2, p. 55 (1892).
   Gelasma clemens, Warren, Novit. Zool. Vol. 12, p. 317 (1905).
4. *C. paularia* (Möschler). — Jamaica, Cuba.
   Nemoria paularia, Moschler, Abh. Senckenb. Nat. Ges. Vol. 14 (3), p. 68 (1886).
   Aplodes punctata, Warren, Novit. Zool. Vol. 11, p. 19 (1904).

1) According to Warren, *Novit. Zool.* Vol. 16, p. 70, bipectinate in *subrutescens*. Our examples — including one from the locality whence the species was originally described — do not bear this out, and there are probably two very close allies mixed; in any case Warren's note proves the existence of one pectinate species in the genus.

5. *C. spumosaria* (Dognin). — Peru, ? Ecuador.
Thalera spumosaria, Dognin, Le Naturaliste, Vol. 14, p. 237 (1892).

6. *C. albidata* (Warren) (præc. var.?). — Mexico to Brazil.
Gelasma albidata, Warren, Novit. Zool. Vol. 4, p. 425 (1897).
Hypnochlora olvidaria, Schaus, Journ. New York Ent. Soc. Vol. 5, p. 161 (1897).
Thalera dalica, Dognin, Ann. Soc. Ent. Belg. Vol. 42, p. 218 (1898).

7. *C. munda* (Warren). — Panama to Argentina.
Gelasma munda, Warren, Novit. Zool. Vol. 4, p. 425 (1897).

8. *C. glauciptera* (Hampson). — W. Indies, Venezuela.
Nemoria glauciptera, Hampson, Ann. Mag. Nat. Hist. (6), Vol. 16, p. 333 (1895).
Iodis languescens, Warren, Novit. Zool. Vol. 4, p. 425 (1897) (nov. syn.).

9. *C. chaga* (Dognin). — Ecuador.
Nemoria chaga, Dognin, Ann. Soc. Ent. Belg. Vol. 42, p. 216 (1898).

10. *C. lechera* (Dognin). — Ecuador.
Iodis lechera, Dognin, Ann. Soc. Ent. Belg Vol. 42, p. 216 (1898).

11. *C. hemithearia* (Warren). — Brazil to Venezuela.
Gelasma hemithearia, Warren, Novit. Zool. Vol. 7, p. 133 (1900).

12. *C. longipalpis* (Warren). — Venezuela.
Iodis (?) longipalpis, Warren, Novit. Zool. Vol. 7, p. 134 (1900).

13. *C. nordicaria* (Schaus). — Mexico.
Gelasma nordicaria, Schaus, Trans. Amer. Ent. Soc. Vol. 27, p. 253 (1901).

14. *C. stigmatica* (Warren). — Peru, ?Columbia.
Gelasma stigmatica, Warren, Novit. Zool. Vol. 11, p. 20 (1904).

15. *C. subrufescens* (Warren). — Guianas to Peru, Paraguay.
Gelasma subrufescens, Warren, Proc. U. S. Nat. Mus. Vol. 30, p. 417 (1906).
Gelasma subrufescens ab. (?) *pallescens*, Warren, Novit. Zool. Vol. 16, p. 76 (1909) (ab. ?).

16. *C. punctilinea* (Dognin). — French Guiana.
Gelasma punctilinea, Dognin, Ann. Soc. Ent. Belg. Vol. 53, p. 88 (1909).

17. *C. dealbata* (Warren). — Peru.
Gelasma dealbata, Warren, Novit. Zool. Vol. 16, p. 76 (1909).

18. *C. decipiens* (Warren). — Peru.
Hemithea decipiens, Warren, Novit. Zool. Vol. 16, p. 77 (1909).

19. *C. diluta* (Dognin). — Colombia.
Gelasma diluta, Dognin, Mém. Soc. Ent. Belg. Vol. 18, p. 160 (1911).

20. **C. pacifica, nov. sp.** 1), Prout. — W. Peru, Chili.

21. **C. acerces, nov sp.** 2), Prout. — Brazil.

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1) **Chloropteryx pacifica, nov sp.** — ♂ ♀, 18-23 mm. Face red-brown. Palpus red, whitish beneath. Head pale green, marked with white between the antennæ. Antennal shaft white proximally, red-brown distally, inner series of ♂ pectinations reddish, outer pale. Thorax pale green. Foreleg reddish above, whitish beneath. Abdomen tinged with reddish dorsally. Wings pale watery green, smoothly scaled; costa of forewing narrowly ochreous, fuscous-dotted. Forewing with two slender, not very conspicuous darkened lines, at one-third and two-thirds, the antemedian rather straight or somewhat sinuous, thickest and most distinct on the veins, the postmedian similar, sinuous, a very fine pale yellowish line at base of fringe; fringe slightly paler than wing. Hindwing with angle at R^3 rather weak; similar to forewing, an elongate cell-mark in place of antemedian line. Underside whitish, with costa of forewing narrowly ochreous, broadly red basally, cell sometimes flushed with pink. Callao, Peru, October-December, 1883 (J. J. Walker). Type ♂ in coll. Brit. Mus.; others both sexes from same locality, March-July, 1881 and December, 1882 to January, 1883, in coll. Brit. Mus. et coll. Oxford Mus. Also in coll. Oxford Mus. a pair from Valparaiso, September 29th to October 8th, 1883, precisely like the Peruvian. These latter bear Commander Walker's original tickets, and he assures us no error in labelling can have occurred. Less shining and glaucous (more tinged with green) than *glauciptera*, differing also in having the lines darker than ground-colour, the costa reddish beneath, etc. Apparently near *chaga*, presumably a little lighter, no white vein-dots punctuating the postmedian, no terminal grey line.

2) **Chloropteryx acerces, nov sp.** — ♀, 34 mm. Face and palpus dull red, palpus with first and second joints white beneath. Vertex white, occiput green, some red scales at the division of the two colours. Antennal scales white proximally, reddish distally. Thorax greenish. Legs whitish, pale red on upperside. Forewing rather broad; glossy olive-greenish, with iridescent reflections; costal edge narrowly red-brown, sprinkled with blackish; lines not very strong, caused by an intensification of the ground-colour, but made more conspicuous by still opaquer accompanying short dashes on the veins distally to the first line and proximally to the second, and whitish vein-dots proximally to the first and distally to the second; first line at one-third, oblique outwards to cell-spot (which is quite small and absorbed in the line), thence parallel with termen; second line sinuous, with an appreciable outward curve from R^2 to M^2; an opaque darker olive line at termen, interrupted with white at the vein-ends; fringe concolorous with wing proximally, somewhat whiter distally. Hindwing slightly elongate, with termen strongly convex, slightly toothed at the vein ends, the tooth at R^3 a little stronger than the others, but not forming the definite tail seen in most of the allies; without the first line; a rather obscure crescentic mark occupying the discocellulars; the rest as in forewing. Underside whiter, except from costa to SC of forewing; costa itself reddish-tinged. Petropolis (H. Doer). Type in coll. Brit. Mus., presented by Lord Walsingham. Possibly a giant form of *chaga*, Dognin, which we have not seen. Larger than most of the allies, forewing with SC^1 free, almost connate with the stalk of SC^2 to R^1; both cells short.

128. Genus EUALLOEA, Warren

Eualloea. Warren, Novit. Zool. Vol. 16, p. 75 (1909).

Characters. — Face smooth. Palpus in ♂ small, second joint rather smoothly scaled, third joint in ♂ quite small (♀ unknown). Tongue present. Antenna rather short, in ♂ nearly simple, lamellate. Hindtibia in ♂ dilated with hair-pencil, all spurs present. Abdomen apparently not crested. Frenulum rather well developed, basal expansion slight. Forewing with costa arched, apex acutely produced, termen subcrenulate, forming a shallow sinus in anterior half, oblique posteriorly, hence appearing elbowed at R^3, cell short, DC very deeply incurved, SC^1 from cell, anastomosing at a point with C, SC^2 normal, R^1 connate, R^2 from above middle of DC, M^1 just separate; hindwing with termen irregularly crenulate, toothed at R^1 and M^1 and with a small tail at R^3, tornus pronounced, inner margin long, cell short, DC^3 deeply incurved, very oblique posteriorly, C anastomosing at a point near base, rapidly diverging, SC^2 stalked, R^2 from close to R^1, M^1 stalked.

Early stages unknown.

Position uncertain; possibly nearer to *Poecilochlora* than to the present group. Or the ♀ may even prove to have the frenulum present.

Type of the genus : *Eualloea subbifasciata*, Warren (1909).

Geographical distribution of species. — Peru to Amazon.

1. *E. subbifasciata*, Warren. Peru, Upper Amazon.
Eualloea subbifasciata, Warren, Novit. Zool. Vol. 16, p. 75 (1909).

129. Genus NEOCRASIS, Warren

Neocrasis. Warren, Novit. Zool. Vol. 8, p. 447 (1901).

Characters. — Face smooth. Palpus in ♂ moderate, second joint shortly scaled, third joint smooth, not elongate (♀ unknown). Antenna in ♂ bipectinate with short branches. Pectus somewhat hairy. Abdomen not crested. Frenulum in ♂ slender, from before basal expansion. Forewing with costa arched proximally and distally, nearly straight between, termen with a deep sinus between SC^5 and R^3, angled at R^3, oblique and slightly concave to tornus, tornus pronounced, cell short, produced apically, DC deeply incurved, SC^1 free, SC^2 normal, R^1 connate, R^2 well above middle, M^1 approximated at origin to R^3; hindwing with apex moderate, termen produced to a strong tail at R^3, tornus pronounced, cell short, DC^3 incurved, C anastomosing shortly with cell near base, then very rapidly diverging, SC^2 very shortly stalked, R^2 from near apex of cell, M^1 very shortly stalked.

Early stages unknown.

The unique type specimen being somewhat damaged, a perfect diagnosis is impossible. The genus is probably related to *Eualloea*, possibly also to *Poecilochlora*. The aspect is somewhat that of a strong, opaque *Chloropteryx*, except in the irregular termen of the forewing.

Type of the genus : *Neocrasis obscurata*, Warren (1901).

Geographical distribution of species. — Colombia.

1. *N. obscurata*, Warren. Colombia.
Neocrasis obscurata, Warren, Novit. Zool. Vol. 8, p. 447 (1901).
2. *N. eximia* (Dognin) (hui. gen. ?). Peru.
Thalera eximia, Dognin, Le Naturaliste, Vol. 14, p. 237 (1892).

130. Genus CTENOTHEA, nov. gen., Prout

Ctenothea, nov. gen. Prout.

Characters. — Face smooth. Palpus rather long, second joint rough-scaled, third joint smoother-scaled, in ♂ rather short and stout, exposed. Tongue present. Antenna moderately long, in ♂ bipectinate to beyond one-half with moderate branches, a long apical portion merely minutely ciliated. Pectus somewhat hairy. Femora glabrous. Hindtibia in ♂ long, dilated, with pencil and short terminal process, median spurs wanting, tarsus rather short. Abdomen with slight crests. Frenulum slender, from before basal expansion. Forewing rather broad, with costa arched, apex moderate, termen nearly smooth, curved, cell less than one-half, DC somewhat incurved, SC^1 from cell, free, SC^2 stalked to much beyond SC^5, M^1 about connate; hindwing with costa rather short, termen and inner margin long, apex rather pronounced, termen faintly subcrenulate, with a short blunt tooth at R^3, tornus pronounced, cell short, DC little curved, C anastomosing at a point with cell, then strongly diverging, SC^2 stalked, M^1 stalked.

Early stages unknown.

Evidently related to the *Hemithea*-group, ♀ probably with four spurs; distinguished chiefly by pectinate antenna and point of origin of SC^2.

Type of the genus : *Ctenothea ornata* (Warren) = *Hemithea ornata*, Warren.

Geographical distribution of species. — Bali to Adenara.

1. *C. ornata* (Warren). Bali to Adenara.

Hemithea ornata, Warren, Novit. Zool. Vol. 3, p. 366 (1896).
Hemithea bella, Warren, ibidem, Vol. 5, p. 234 (1898).

131. Genus CYCLOTHEA, nov. gen., Prout

Cyclothea, nov. gen. Prout.

Characters. — Face smooth. Palpus long, rather slender, second joint shortly scaled, reaching beyond frons, third joint smooth, in ♂ rather long, in ♀ very long. Tongue present. Antenna in ♂ strongly serrate dentate, with fascicles of well-developed cilia; in ♀ minutely ciliated. Pectus moderately hairy. Femora glabrous. Hindtibia in ♂ with sheath and hair-pencil, as in *Hemithea*, median spurs wanting; in ♀ with median spurs wanting. Abdomen with small curled dorsal crests. Frenulum in ♂ slender, from before basal expansion, in ♀ wanting. Forewing with costa arched, apex acute, minutely produced, termen very slightly curved, somewhat oblique, tornus rather pronounced, cell less than one-half, DC^3 incurved, SC^1 from cell, free or anastomosing briefly with C, SC^2 normal, R^1 connate or just separate, M^1 from close to R^3; hindwing with apex and tornus squared, termen tailed at R^3, rather straight anteriorly and posteriorly, cell scarcely two-fifths, DC^3 little oblique, C shortly approximated to cell near base (not anastomosing), SC^2 stalked, M^1 stalked.

Early stages unknown.

Distinct from *Hemithea* chiefly in the ♀ hindtibia and in the non-anastomosis of vein C of hindwing.

Type of the genus : *Cyclothea disjuncta* (Walker) = *Thalera disjuncta*, Walker.

Geographical distribution of species. — India, Sumatra.

1. *C. disjuncta* (Walker). S. India with Ceylon, Sumatra.
   Thalera disjuncta, Walker, List Lep. Ins. Brit. Mus Vol. 22, p. 595 (1861).
   Hemithea disjuncta, Hampson, Fauna Ind. Moths, Vol 3, p. 492, f. 217 (1895).

132. Genus NEROMIA, Staudinger

Neromia. Staudinger, Iris, Vol. 10, p. 304 (1898).

Characters. — Face smooth. Palpus (in type species) quite moderate, almost alike in both sexes, second joint shortly scaled, third joint smooth, small. Tongue present. Antenna moderate, in both sexes evenly ciliated (very shortly in ♀), only in *phoenicosticta* shortly bipectinate. Pectus slightly hairy. Femora glabrous. Hindtibia in ♂ not dilated, in both sexes with terminal spurs only. Abdomen not crested. Frenulum in ♂ short and very slender, from before basal expansion; in ♀ wanting. Forewing with costa arched towards apex, apex moderate, termen smooth, nearly straight, very oblique, cell not quite one-half, DC incurved, SC^1 from cell (stalked in *atridisca*), free or anastomosing with C, SC^2 normal, R^1 short-stalked, R^2 from much above middle of DC, M^1 connate or short stalked; hindwing with apex and termen rounded, tornus moderate, inner margin rather long, cell short, DC^3 oblique, C usually anastomosing with cell at a point, rapidly diverging, SC^2 longish-stalked, R^2 characteristic, M^1 longish-stalked.

Early stages unknown.

Type of the genus : *Neromia pulvereisparsa* (Hampson) = *Nemoria pulvereisparsa* (Hampson) *Neromia iodisata*, Staudinger (1898).

Geographical distribution of species. — Palestine to Aden, ? India and China, ? S. Africa.

1. *N. pulvereisparsa* (Hampson). Palestine to Aden.
   Nemoria pulvereisparsa, Hampson, Proc. Zool. Soc. Lond. p. 268, t. 19, f. 27 (1860).
   Neromia iodisata, Staudinger, Iris, Vol 10, p. 304, f. 4, t. 28 (1898) nov syn. [1].
2. *N. carnitrons* (Butler) (huj gen.?) [2]. India.
   Nemoria carnitrons, Butler, Proc. Zool. Soc. Lond. p. 169 (1883).
   Nemoria undecretata (part.?), Hampson, Fauna Ind. Moths, Vol. 3, p. 502, f. 222 (1895).
3. *N. rectilinearia* (Leech) (praec. var. vel syn.?). W. China.
   Nemoria rectilinearia, Leech, Ann. Mag. Nat. Hist. (6), Vol. 20, p. 241 (1897).
4. *N. atridisca* (Warren) (huj. gen.?). Natal.
   Hemithea atridisca, Warren, Novit. Zool. Vol. 4, p. 40 (1897).
   Nemoria atridisca, Warren, ibidem, Vol. 5, p. 235 (1898).
5. **N. rubripunctilla, nov. sp.** [3]), Prout (huj. gen.?). Transvaal

1) This synonymy ist not absolutely certain, as we have seen only a few poor specimens, and only the ♂ of *iodisata*, ♀ of *pulvereisparsa*. In any case the two must be very close allies.

2) Differs in shape and aspect, in more minute palpus and in dentate fasciculate ♂ antenna, but may be provisionally referred here. Differs from *Mixocera* in presence of ♂ frenulum.

3) **Neromia** (?) **rubripunctilla, nov. sp.** — ♂, 24 mm. Face ochreous reddish. Palpus quite short, appressed to face, ochreous reddish above, paler beneath. Antenna rather thick, tapering, not ciliated, reddish ochreous, proximal part white above. Vertex white, occiput green. Thorax and abdomen green above, whitish beneath, abdomen with a thick ochreous dorsal line; anal tuft strong, whitish. Wings green, slightly bluish, irrorated and minutely strigulated with white. Forewing with costa narrowly ochreous; discal dot minute, red; lines in the type obsolete, merely the faintest suggestion of a postmedian from about two-thirds of inner margin, losing itself in middle of wing: fringe ochreous, narrowly green proximally, inner-marginal fringe mostly green. Hindwing with termen rounded, inner margin not very long; a discal dot as in forewing, but slightly less distinct; fringe as in forewing. Underside whitish green, unmarked, fringes tinged with ochreous, costa of forewing ochreous. Pretoria, Transvaal, 14th September, 1000, very fresh (A. J. T. Janse). Type in coll. Brit. Mus. Aberrant in the minute palpus (scarcely as long as diameter of eye), non-ciliate antenna, presence of hair-pencil on hindtibia and in the course of C of hindwing, which does not diverge from quite so near base; but agreeing better with this genus than with any other known. Forewing with SC^1 free, R^1 short-stalked. A second ♂, Three Sisters, Transvaal, 9 March, 1911, in coll. A. J. T. Janse, has both transverse lines on forewing and a postmedian on hindwing, though all rather indistinct; antemedian of forewing from before one-third, curved, postmedian from beyond two-thirds, almost parallel with termen, postmedian of hindwing almost parallel with termen. Two ♀♀ in coll Brit. Mus., no doubt conspecific, are much larger (30 mm.), the lines distinct. They have terminal spurs only. One is from Mashonaland (H. B. Dobbie), the other from Bulawayo, Rhodesia, January, 1903 (F. Eyles).

6. **N. barretti, nov. sp.** 1), Prout (huj. gen.?). Cape.
7. **N. phœnicosticta, nov. sp.** 2), Prout (huj. gen.?). Rhodesia.
8. **N. chlorosticta, nov. sp.** 3), Prout (huj. gen.?). German E. Africa.

133. Genus PSEUDHEMITHEA, Bastelberger

Pseudhemithea. Bastelberger, Intern. Ent. Zeit. Guben, Vol. 2, p. 281 (1909).

Characters. — Face smooth. Palpus minute, in ♂ (type-species) scarcely over one-half diameter of eye (♀ unknown). Tongue present. Antenna nearly simple, minutely ciliated. Pectus hairy. Femora slightly hairy. Hindtibia in ♂ thickened, with strong ensheathed hair-pencil and terminal spurs only; hindtarsus short. Abdomen crested. Frenulum in ♂ slender, from before moderate basal expansion. Forewing broad, costa arched at base and near apex, very slightly between, apex squared, termen not very oblique, tornus squared, cell less than one-half, DC incurved, SC^1 from cell, free, SC^2 normal, R^1 just separate, M^1 connate; hindwing with apex rounded, termen gently waved, slightly cut away from C to R^1, leaving a minute tooth or angle at R^1, cell two-fifths, DC scarcely incurved, little oblique posteriorly, C anastomosing with cell at a point near base, moderately rapidly diverging, SC^2 short-stalked, M^1 very shortly stalked.

Early stages unknown.

We are indebted to Dr. Bastelberger for the loan of one of his types of the species on which this genus is based. The minute palpus, still more than the slight peculiarity in the shape of the hindwing, separates it essentially from *Hemithea* and *Chlorissa*. From the African species which we have doubtfully referred to *Neromia* it is distinct (even if its ♀ prove to be two-spurred) in the crested abdomen.

Type of the genus : *Pseudhemithea detrita*, Bastelberger (1909).

Geographical distribution of species. — W. Africa.

1) **Neromia (?) barretti, nov. sp.** — ♂ ♀, 28-32 mm. Face red. Palpus minute, reddish above, whiter beneath. Antenna in both sexes simple, the scaled surface white. Head green, narrowly white between the antennæ. Thorax and abdomen green, paler beneath and at anus, a white dorsal line. Foreleg reddish. Wing-shape and aspect of *Chlorocoma;* green, slightly more yellowish than in *rubripunctilla*, irrorated and minutely strigulated with white. Forewing with costal edge very narrowly pale; lines whitish, not very conspicuous; antemedian from costa at one-third (♂) or at little beyond one-fourth (♀), outcurved at first, reaching inner margin nearly perpendicularly or by a slight incurve; postmedian from costa at beyond two-thirds, nearly parallel with termen; no discal spot or terminal line; fringe concolorous in proximal half, paler in distal. Hindwing without antemedian line; postmedian slightly curved or nearly straight. Underside paler green, with the faintest possible traces of a still paler postmedian line. Annsbaw, Cape Colony (Miss F. Barrett). Type (♂) in coll. Brit. Mus. The ♀, also collected by Miss Barrett, is merely labelled « Cape », but probably from the same locality. Possibly a local form of *rubripunctilla*, differing in lack of cell-spots; structure practically identical. The transverse lines are evidently rather subject to variation, being considerably more approximated in the type ♂ than in the ♀ and the two ♀♀ believed to belong to *rubripunctilla*

2) **Neromia (?) phœnicosticta. nov sp.** — ♂, 31 mm. Face and palpus deep red, narrowly pale below. Antenna short and stout, with short stout pectinations (the inner series quite rudimentary) which give place to serration at towards three-fourths, last few joints almost simple; shaft whitish at base, otherwise ochreous. Head green, narrowly white between antennæ. Thorax green above. Foreleg deep red above (middle legs lost). Hindtibia not dilated, both spurs rather long, though unequal. Abdomen dorsally with a series of narrow reddish marks, placed longitudinally. Wings bright green, finely irrorated with whitish, costal edge of forewing narrowly light ochreous, unspotted; lines whitish, very faint; antemedian wanting on hindwing, on forewing scarcely discernible, apparently curved and somewhat oblique outwards; postmedian on both wings parallel with termen, at a distance of 3 mm.; each wings with a conspicuous crimson cell spot, containing a few blackish scales distally; fringes strongly tinged with crimson. Underside paler, unmarked, costa as above. Luena River, N. E. Rhodesia, 8 September, 1904 (R. L. Harger). Type in coll. Brit Mus. Wings broader than in true *Neromia* (shaped as *Prasinocyma*-type), forewing with SC^1 briefly anastomosing with C, R^1 about connate, hindwing with SC^2 short-stalked, M^1 just separate. A ♀ of the same structure differs as follows : paler, bluer green, discal spots rather red-lead than crimson, fringes green, without a trace of crimson, dorsal marks of abdomen whitish, not red. Antenna simple, third joint of palpus short. Selukwe, Rhodesia, February-March, 1911. Kindly presented to us by the captor, F. W. Short, B. Sc. Should this prove a local race or distinct species, we name it **Neromia (?) miltosticta,** *nov.*

3) **Neromia (?) chlorosticta, nov. sp.** — ♂, 21-22 mm. Face brown-red. Palpus minute, ochreous, tipped with reddish. Antenna almost simple, thick, ochreous, paler proximally on upper side. Head green, narrowly whitish between antennæ. Thorax and abdomen green dorsally, white ventrally, anal tuft pale ochreous. Legs pale ochreous, fore- and midfemora and tibiæ reddish above and on inner side. Forewing green, with costal edge narrowly pale ochreous; discal spot darker green; antemedian line obsolete, postmedian from costa at slightly beyond three-fourths, paler than ground-colour, but not conspicuous, denticulate; fringe concolorous. Hindwing similar, the line strongly curved (almost more strongly than the termen itself). Underside paler green, unmarked. German East Africa (S. A Neave), two ♂♂ in coll. Brit. Mus.; the type from the Valley of the Ruaha River Iringa to Kilossa Road, 2000 feet, 21 December, 1910, the cotype Banks of Ruaha River, 20 December, 1910. In both examples SC^1 is free, R^1 and M^1 of forewing just stalked, of hindwing more strongly so; C of hindwing, exceptionally for this genus, anastomoses with cell for nearly two-fifths.

1. *P. detrita*, Bastelberger. Angola.
Pseudhemithea detrita, Bastelberger, Intern. Ent. Zeit. Guben, Vol. 2, p. 281 (1909).
2. **P. saturata, nov. sp.** [1]). Prout. Nigeria.

134. Genus DIPLODESMA, Warren

Diplodesma, Warren, Novit. Zool. Vol. 3, p. 289 (1896)
Acrortha Warren, ibidem, p. 361 (1896)
Halophanes. Warren, ibidem, Vol. 7, p. 102 (1900).

Characters. — Face smooth. Palpus moderate to rather long, second joint shortly rough-scaled, third joint smooth, in ♂ moderate, in ♀ long. Tongue present. Antenna in ♂ with rather short, even ciliation, in ♀ more minutely ciliated. Pectus slightly hairy. Femora glabrous. Hindtibia in ♂ dilated with hair-pencil, median spurs wanting, in ♀ with all spurs (except apparently in *subexpressa* and possibly *subtusumbrata*). Abdomen not crested (except in *pudentifimbria*). Frenulum in ♂ very slender and usually short, arising before well-marked basal expansion; in ♀ wanting. Wings smooth-scaled, sometimes in part subdiaphanous. Forewing with costa gently arched, apex moderate, termen rather straight anteriorly, then curved and becoming rather strongly oblique, cell short, DC somewhat incurved, C reaching costa unusually near apex, SC^1 stalked to beyond R^1, short, running into C, SC^2 variable, either normal, or running into C, or wanting, or stalked to beyond SC^5, R^1 stalked, M^1 connate or short-stalked; hindwing with apex moderate or rounded, termen angled or tailed at R^3 (in *xanthochlora* also with slight prominence at R^1), tornus pronounced, inner margin rather long, cell short, DC slightly curved, SC^2 stalked, R^2 characteristic, M^1 well stalked, M^2 from close to end of cell, sometimes almost connate with stalk of R^3 to M^1 (**Pl. 3, Fig. 17**). ♂ genitalia: uncus pointed, with slender curved socii of equal length, harpe with small hook near the base of the inner surface, costa of harpe clothed with long clubbed scales; penis pestillate. Related to *Chlorissa*, etc.

Early stages unknown.

Except in the curious variability of SC^2 of the forewing, and possibly the ♀ hindtibial armature of one or two species, a genus of very uniform structure. The variations of SC^2, though they are — so far as we have observed — nearly always constant racially, can scarcely be treated as generic, as they sometimes separate forms so closely alike as to be scarcely otherwise distinguishable, while uniting forms much more widely divergent in facies (e. g. *xanthochlora* and *subexpressa*). We have put the variations on record by dividing the genus into sections; Section III is probably intermediate towards *Hemithea*.

Type of the genus: *Diplodesma celataria* (Walker) = *Thalera celataria*, Walker (1896).

Geographical distribution of species. — Indo-Australian.

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1) **Pseudhemithea saturata, nov. sp.** — ♂, 24 mm. Face deep red. Palpus almost as long as diameter of eye, reddish. Antenna reddish, more ochreous proximally. Vertex and thorax dorsally (with base of abdomen) concolorous with wings. Breast and front of forecoxa red. Abdomen pale ochreous brown, mixed with red dorsally, second, third and fourth segments with red and black, crests rather strong, mixed with red and black. Wings rather dark blue-grey, slightly tinged with olive-green. Forewing with costal edge narrowly bright reddish ochreous, slightly spotted with fuscous; the lines and cell-spot olive-green; antemedian from costa before one-fourth, oblique outwards, irregular, rather thick, but very ill-defined; postmedian thick, distinct except at costa, lunulate-dentate, projecting distad at R^3 and M^1, these teeth the sharpest, incurved between M^1 and SM^2, only weakly outbent on SM^2, slightly pale-edged distally, especially towards inner margin; cell-spot rather large; fringe concolorous, with a very slender pale line at base. Hindwing similar, without antemedian line. Underside much paler, unmarked, the costal shade of forewing broader, especially at base. Ilesha, S. Nigeria (L. E. H. Humfrey). Type in coll. Brit. Mus. Excepting the rather longer palpus, the structure appears quite typical.

Section I. — Forewing with SC^2 running into C (*Diplodesma*, Warren).

1. *D. celataria* (Walker). — Sula to N. Australia
   Thalera celataria, Walker, List Lep. Ins. Brit. Mus. Vol. 35, p. 1614 (1866).
   Diplodesma celataria, Warren, Novit. Zool. Vol. 3, p. 289 (1896).
   Euchloris thalassica, Turner, Trans. Roy. Soc. S. Austral. Vol. 28, p. 221 1904 (nec Swinhoe, 1894) 1) (var.?).

Section II. — Forewing with SC^2 wanting (*Acrortha*, Warren) 2).

2. *D. obnupta* (Swinhoe). — Bombay to Ceylon, ?Assam.
   Thalera obnupta, Swinhoe, Proc. Zool. Soc. Lond. p. 855, t. 56, f. 9 (1885).
   Nemoria viata, Moore, Lep. Ceyl. Vol. 3, p. 431, t. 195, f. 6 (1887).
   Thalassodes melica, Swinhoe, Trans. Ent. Soc. Lond. p. 144 (1891).
   Thalassodes obnupta, Hampson, Fauna Ind. Moths, Vol. 3, p. 513 (1895).
   Thalera viata, Hampson, ibidem, p. 516 (1895).
   Acrortha flexicosta, Warren, Novit. Zool. Vol. 3, p. 361 (1896).
   Diplodesma obnupta, Warren, ibidem, Vol. 10, p. 263 (1903).
3. *D. contracta* (Warren) (præc. var.?). — Khásis, Perak, Java.
   Idiochlora contracta, Warren, Novit. Zool. Vol. 3, p. 107 (1896).
   Thalassodes contracta, Hampson, Journ. Bomb. Nat. Hist. Soc. Vol. 12, p. 92 (1898).
   Halophanes integra, Warren, MS. (in Tring Mus.).

Section III. — Forewing with SC^2 normal, not running into (usually not touching) C.

4. *D. mundaria* (Leech). — W. China.
   Hemithea mundaria, Leech, Ann. Mag. Nat. Hist. (6), Vol. 20, p. 233 (1897).
5. **D. pudentifimbria, nov. sp.** 3), Prout. — Assam, ? Borneo.

Section IV. — Forewing with SC^2 stalked to beyond SC^5, well separate from C (*Halophanes*, Warren).

6. *D. xanthochlora* (Swinhoe). — Khásis.
   Maxates xanthochlora, Swinhoe, Ann. Mag. Nat. Hist. (6), Vol. 14, p. 135 (1894).
   Halophanes xanthochlora, Warren, Novit. Zool. Vol. 7, p. 103 (1900).
7. *D. subexpressa* (Walker). — Borneo.
   Thalera subexpressa, Walker, List Lep. Ins. Brit. Mus. Vol. 22, p. 599 (1861).
   Thalera innotata, Walker, ibidem, p. 599 (1861).
   Diplodesma olivata, Warren, Novit. Zool. Vol. 4, p. 389 (1897) (nov. syn.).
   Hemithea subexpressa, Swinhoe, Lep. Het. Oxford Mus. Vol. 2, p. 393 (1900).
8. *D. subtusumbrata* (Fuchs) (præc. var. vel ab.?). — Sumatra, Singapore.
   Eucrostis (Nemoria?) subtusumbrata, Fuchs, Jahrb. Nassau. Ver. Nat. Vol. 55, p. 84 (1902).

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1) *Euchloris thalassica*, Swinhoe, *Trans. Ent. Soc. Lond.* 1894, p. 175 = *Jodis thalassica*, Moore, is a synonym of «*Ephyra*» *validaria*, Walker, subfam. *Acidaliinae*, see Hampson, *Fauna Ind. Moths*, Vol. 3, p. 446. Systematists are not agreed as to whether this, not being an original binomial, should invalidate the later name; but as Turner's *thalassica* is a synonym, the point is not of immediate importance.

2) The difference between this and Section I is not sexual, as Warren (*Novit. Zool.* Vol. 10, p. 263) suggests, but it is easy to see how it arises, for the degree of approach between SC^4 and SC^5 is very variable in *celataria*, and the ultimate tendency would be to become coincident.

3) **Diplodesma pudentifimbria, nov. sp.** — ♂ ♀, 22-23 mm. Face green (discolouring towards red). Palpus greenish tinged with red above and at tip. Head green, white between the antennæ. Antennal shaft reddish, whiter towards base. Thorax green above, pale beneath. Abdomen above green at base, then reddish with a red and a white dorsal crest. Forewing slightly more elongate than in the type, SC^2 free, or touching C, not running into it; colour green, smooth-scaled but not subdiaphanous, costal edge narrowly ochreous, weakly spotted with fuscous; lines whitish, at about one-third and two-thirds; antemedian very indistinct, wavy, oblique outwards from costa, and somewhat outcurved in submedian area, otherwise nearly parallel with termen, narrowly shaded with olive distally; postmedian slightly wavy (more so in the ♀), almost parallel with termen, narrowly shaded with olive proximally; terminal dark line fine, weak in the ♂, stronger in ♀, interrupted by pale spots at vein-ends; fringe pale ochreous, tinged with pink. Hindwing without antemedian line, having instead an indistinct, elongate dark cell-mark; postmedian line with an outward bend from R^3 to M^2, termen and fringe as in forewing. Under surface paler, unmarked, costal edge ochreous. Shillong, Assam, 15 September, 1900, type ♂; 24 June 900, cotype (♀), both in coll. Brit. Mus., collected by H. M. Parish.

135. Genus LATHOCHLORA, Warren

Lathochlora. Warren, Novit. Zool. Vol. 7, p. 90 (1900).

Characters. — Face smooth. Palpus (in ♂ unknown) in ♀ moderate, slender, third joint exposed, smooth, somewhat elongate. Tongue present. Antenna in ♀ rather short and thick, lamellate. Hindtibia with terminal spurs only. Abdomen not crested. Frenulum in ♀ wanting, costal expansion marked. Wings smoothly scaled. Forewing broad, with costa strongly arched, apex acute, termen strongly gibbous in middle, the gibbosity culminating beyond R^3, thence sinuous and very oblique, cell short, DC^2 curved, DC^3 arising distad, SC^1 long-stalked with $SC^{2,5}$, quitting little before SC^5, SC^2 stalked to far beyond SC^5. R^1 just separate, R^2 from above middle of DC, M^1 connate; hindwing with apex rounded, termen produced at R^1 and R^5, with excision between, anal angle pronounced, cell short, DC slightly angled at origin of R^2, C anastomosing with cell at a point near base, rapidly diverging, SC^2 stalked, M^1 short-stalked.

Early stages unknown.

The above characterization is drawn up from Warren's single (and not quite perfect) type ♀, and we know of no other example. The genus appears to be a valid one, and there can be little doubt that the ♂ will prove to possess a frenulum. It is very probable, as Warren suggests, that the genus is related to the preceding, though the shape of the wings is much more closely that of *Bathycolpodes* or *Chloroparda*.

Type of the genus : *Lathochlora inornata*, Warren (1900).

Geographical distribution of species. — W. African

1. *L. inornata*, Warren — Niger Coast.
Lathochlora inornata, Warren, Novit. Zool. Vol. 7, p. 91 (1900).

136. Genus PROHYDATA, Schaus

Prohydata, Schaus, Trans. Amer. Ent. Soc. Vol. 27, p. 251 (1901); Prout, Ann. Mag. Nat. Hist. (8), Vol. 6, p. 236 (1910).

Hyalorrhoë Warren, Novit. Zool. Vol. 11, p. 21 (1904).

Characters. — Face smooth. Palpus moderate to long, slender, second joint usually reaching beyond frons, shortly scaled, third joint smooth, often greatly elongate. Tongue present. Antenna in ♂ bipectinate to about two-thirds, with moderate branches; in ♀ dentate or shortly bipectinate. Pectus slightly hairy. Femora glabrous. Hindtibia in ♂ somewhat dilated, with hair-pencil and terminal process, all spurs developed. Abdomen not crested. Frenulum in ♂ slender, from before basal expansion. Wings more or less hyaline. Forewing with costa slightly arched, apex rather acute, termen oblique, gently curved, cell one-half or rather less, DC incurved, oblique posteriorly, SC^1 from cell, anastomosing strongly with C, $SC^{2,5}$ long-stalked, SC^2 given off after SC^5, R^2 separate (short-stalked in *stigmatica* and *auster*), R^2 from above middle, M^1 well separate; hindwing with apex usually rounded or subcrenulate, termen somewhat toothed at R^1, usually a little excised between this and D^3, cell short, DC^3 incurved, strongly oblique posteriorly, C anastomosing with cell at a point, or closely appressed, diverging rather gradually at first, SC^2 long-stalked, R^2 very characteristic, M^1 separate.

Early stages unknown.

We have not been able to study much material in this genus, and are not sure about its stability. It differs only from *Hydata* in the very brief anastomosis (or non-anastomosis) of C of the hindwing, but inasmuch as even in *Hydata* this varies somewhat (e. g. in *povera* we have found the anastomosis much weaker in the ♂ than in the ♀) it would not be surprising to find that some ♀♀ of *Prohydata* upset the distinction altogether. We have not seen Schaus' type-species, which is said to have the palpus « short », and our characters are drawn chiefly from *projiciens*.

Type of the genus : *Prohydata apicata*, Schaus (1910).

Geographical distribution of species. — Neotropical.

1. *P. apicata*, Schaus. — Bolivia.
   Prohydata apicata, Schaus, Trans. Amer. Ent. Soc. Vol. 27, p. 251 (1901).
2. *P. vitrearia*, Schaus. — Venezuela.
   Prohydata vitrearia, Schaus, Trans. Amer. Ent. Soc. Vol. 27, p. 251 (1901).
3. *P. pellucidaria* (Dognin). — Ecuador.
   Racheospila pellucidaria, Dognin, Le Naturaliste, Vol. 14, p. 206 (1892).
4. *P. stigmatica* (Warren). — Costa Rica.
   Hyalorrhoë stigmatica, Warren, Novit. Zool. Vol. 11, p. 21 (1904).
5. *P. brunneopicta* (Warren). — Peru.
   Hydata brunneopicta, Warren, Novit. Zool. Vol. 14, p. 203 (1907).
6. *P. latifasciata* (Warren). — Peru.
   Hydata latifasciata, Warren, Novit. Zool. Vol. 14, p. 203 (1907).
7. *P. benepicta*, Warren. — Upper Amazon.
   Prohydata benepicta, Warren, Novit. Zool. Vol. 16, p. 84 (1909).
8. *P. aurata*, Dognin. — Colombia.
   Prohydata aurata, Dognin, Hét. Nouv. Amér. Sud (1), p. 21 (1910).
9. *P. projiciens*, Prout. — **Pl. 5, Fig. 5.** — Colombia.
   Prohydata projiciens, Prout, Ann. Mag. Nat. Hist. (8), Vol. 6, p. 235 (1910).
10. **P. auster, nov. sp.** [1]), Prout. — S. E. Brazil.

137. Genus HYDATA, Walker

Hydata. Walker, List Lep. Ins. Brit. Mus. Vol. 26, p. 1621 (1862).

Characters. — Face smooth. Palpus smooth, slender, moderate to very long. Tongue present. Antenna in ♂ bipectinate to about two-thirds with moderate to long branches, in ♀ minutely ciliated. Pectus slightly hairy. Femora glabrous. Hindtibia in ♂ sometimes dilated with hair-pencil and terminal process, in both sexes with all spurs developed. Abdomen not crested. Frenulum in ♂ slender, sometimes colourless, arising from before basal expansion; in ♀ wanting. Wings more or less hyaline. Forewing with costa slightly or moderately arched, apex rather acute, termen rather straight anteriorly, curved or bent in middle, becoming rather strongly oblique, cell nearly one-half, DC incurved, becoming strongly oblique, SC^1 from cell, anastomosing with C, sometimes becoming coincident, $SC^{2\text{-}5}$ long-stalked, SC^2 given off after SC^5, R^1 separate or almost connate, R^2 from above middle of DC, M^1 rather widely separate; hindwing with apex rounded, termen very slightly or strongly toothed

1 **Prohydata auster, nov. sp.** — ♀, 20 mm. Head green, between antennæ white. Antennal shaft white. Thorax and abdomen pale green above, white beneath. Wings shaped and marked nearly as in *stigmatica*, Warren. Forewing pale yellow-green, thinly scaled, the markings opaquer olive-green, but indistinct, except in certain lights, consisting of : a patch at base, its margin outangled on M ; a thick antemedian line, from costa just beyond one-third to inner margin at one-half, forming two curves, with a strong angle at the origin of M_2, posterior half the thicker ; a very large, slightly curved cell-spot ; a thick, slightly interrupted curved line from costa at about three-fourths, the outward curves being in middle and at inner margin (where it becomes still thicker) ; a faint slender line between this line and the cell-spot, following the same course ; vague suggestions of large spots on termen ; in some lights the whole costal area also appears darkened ; hindwing similar, but with a large blotch on inner margin in place of antemedian line, and a quite small, conspicuous cell-spot. Underside whitish, forewing feebly marked, hindwing unmarked. Sao Paolo, S. E. Brazil (E. D. Jones). Type in coll. Brit. Mus. Distinguished from *stigmatica* by having truly pectinate antenna (the pectinations about three times diameter of shaft) ; palpus less long than in most of the allies, very slender, the third joint excessively so (but somewhat damaged) ; SC^1 of forewing running into C.

at R^1, straight or somewhat excised to R^3, there bent, tornus usually pronounced, cell less than one-half, DC^3 incurved, oblique posteriorly, C anastomosing more or less strongly with cell, SC^2 long-stalked, M^1 separate (Pl. 3, Fig. 14).

Early stages unknown.

Type of the genus : *Hydata subfenestraria*, Walker.

Geographical distribution of species. — Neotropical.

1. *H. subfenestraria*, Walker. — Venezuela, Brazil.
   Hydata subfenestraria, Walker, List Lep. Ins. Brit. Mus. Vol. 20, p. 1022 (1862).
2. *H. translucidaria* (Herrich-Schäffer). — Brazil, Mexico.
   Geometra translucidaria, Herrich-Schäffer, Samml. Aussereur. Schmett. Vol. 1, t. 61, f. 343 (1855 ; p. 62 (1856).
   Nemoria (?) *translucidaria*, Guenée, Spec. Gén. Lép. Vol. 9, p. 346 (1858).
   Racheospila translucidaria, Druce, Biol. Centr. Amer. Lep. Het. Vol. 2, p. 91 (1892).
   ?*Hydata sordida*, Schaus, Trans. Amer. Ent. Soc. Vol. 27, p. 250 (1901) (nov. syn.).
   Hydata transductaria, Warren, Novit. Zool. Vol. 14, p. 203 (1907).
3. *H. satisfacta* (Walker). — Brazil.
   Racheospila satisfacta, Walker, List Lep. Ins. Brit. Mus. Vol. 22, p. 583 (1861).
4. *H. caducata* (Felder) (huj. gen.?). — French Guiana.
   Nemoria caducata, Felder, Reise Novara, Lep. Het. t. 127, f. 35 (1875).
5. *H. busa* (Druce) (huj. gen.?). — Panama.
   Racheospila busa, Druce, Biol. Centr. Amer. Lep. Het. Vol. 2, p. 92, t. 50, f. 8 (1892).
6. *H. alada* (Dognin). — Ecuador.
   Racheospila alada, Dognin, Ann. Soc. Ent. Belg. Vol. 42, p. 218 (1898).
7. *H. felderi*, Schaus. — Mexico.
   Hydata felderi, Schaus, Trans. Amer. Ent. Soc. Vol. 27, p. 250 (1901).
8. *H. povera*, Schaus. — Mexico to Venezuela.
   Racheospila satisfacta, Druce, Biol. Centr. Amer. Lep. Het. Vol. 2, p. 91, t. 50, f. 7 (1892) (nec Walker) [1].
   Hydata povera, Schaus, Trans. Amer. Ent. Soc. Vol. 27, p. 250 (1901).
9. *H. popayanaria* (Dognin). — Colombia.
   Hypnochlora popayanaria, Dognin, Ann. Soc. Ent. Belg. Vol. 45, p. 310 (1901).
   Hydata popayanaria, Prout, Ann. Mag. Nat. Hist. (8), Vol. 6, p. 235 (1910).
10. *H. diaphana*, Warren, (huj. gen.?). — Peru.
    Hydata diaphana, Warren, Novit. Zool. Vol. 11, p. 86 (1904).
11. *H. spilosata*, Warren. — Argentina, Brazil.
    Hydata spilosata, Warren, Novit. Zool. Vol. 14, p. 204 (1907).
12. *H. radiata*, Warren. — Peru.
    Hydata radiata, Warren, Novit. Zool. Vol. 16, p. 77 (1909).
13. *H. scripturata*, Warren. — Peru.
    Hydata scripturata, Warren, Novit. Zool. Vol. 16, p. 78 (1909).
14. *H. muscosa*, Dognin. — Colombia.
    Hydata muscosa, Dognin, Hét. Nouv. Amer. Sud (1), p. 21 (1910).
15. *H. propinqua*, Prout. — Colombia.
    Hydata propinqua, Prout, Ann. Mag. Nat. Hist. (8), Vol. 6, p. 234 (1910).
16. *H. elegans*, Bastelberger. — Peru.
    Hydata elegans, Bastelberger, Intern. Ent. Zeit. Guben, Vol. 5, p. 54 (1911).

Note. — *Hydata spectabilis*, Butler, *Proc. Zool. Soc. Lond.* 1877, p. 474, belongs to the *Geometrinae (Boarmiinae)*.

1) The specimen recorded by Walker (p. 583) as « male ? » to his *satisfacta*, though in very poor condition, is pretty evidently the *satisfacta* of Druce (nec Walker, specim. typ.).

138. Genus PACHYCOPSIS, Warren

Pachycopsis. Warren, Novit. Zool. Vol. 4, p. 428 (1897).
Paraplodes. Warren, ibidem, Vol. 11, p. 24 (1904).

Characters. — Face smooth. Palpus very slender, in ♂ rather short, but with third joint long in proportion, in ♀ longer, third joint very elongate. Tongue slender. Antenna in ♂ bipectinate with rather long branches, apical part merely serrate; in ♀ serrate or with short pectinations. Pectus slightly hairy. Femora glabrous. Hindtibia in ♂ with pencil of hairs and short terminal process, in both sexes with terminal spurs only, the inner long. Abdomen not crested. Frenulum in ♂ short and slender, from before basal expansion, in ♀ wanting. Wings rather thinly and smoothly scaled. Forewing with costa arched, apex moderate, termen curved, cell less than one-half, SC^1 from cell, anastomosing strongly with or running into C, SC^2 stalked to beyond SC^5, M^1 separate; hindwing rather long, termen rounded, often slightly sinuous, tornus pronounced, cell short, C anastomosing with cell for a considerably distance, SC^2 very long-stalked, M^1 well separate.

Early stages known.

On the whole somewhat less hyaline than *Hydata*, to which it is nearly related; but the chief structural difference is the absence of the median spurs in both sexes.

Type of the genus : *Pachycopsis tridentata*, Warren (1897).

Geographical distribution of species. — Tropical South America.

1. *P. tridentata*, Warren. — Ecuador to French Guiana.
   Pachycopsis tridentata, Warren, Novit. Zool. Vol. 4, p. 428 (1897).
   Hydata tridentata, Warren, ibidem, Vol. 14, p. 204 (1907).
2. *P. malina* (Butler). — Amazons to French Guiana.
   Aplodes malina, Butler, Trans. Ent. Soc. Lond. p. 330 (1881).
   Hydata malina, Warren, Novit. Zool. Vol. 7, p. 134 (1900).
   Hyalorrhoë malina, Warren, ibidem, Vol. 11, p. 21 (1904).
3. *P aurata* (Warren). — Ecuador.
   Paraplodes aurata, Warren, Novit. Zool. Vol. 11, p. 25 (1904).
4. *P. lunifera* (Warren). — Peru.
   Hydata lunifera, Warren, Novit. Zool. Vol. 14, p. 204 (1907).

Note. — Felder's *caducata*, which we have placed provisionally in *Hydata*, may have to be transferred here. We have seen two ♀♀ of a *Pachycopsis* from the island of Taboga which may be referable to it, but have had no opportunity of comparing them with Felder's type. The figure, like so many of Felder's among the *Geometridae*, is unrecognizable.

139. Genus CHLOROCOMA, Turner

Chlorocoma. Turner, Proc. Linn. Soc. N. S. Wales, Vol. 35, p. 581 (1910).
Chlorochroma. Guenée, Spec. Gén. Lép. Vol. 9, p. 365 (1858) (nec Duponchel, 1845).

Characters. — Face smooth. Palpus short, but not very slender, second joint short or moderately scaled, third joint in both sexes quite small. Tongue well developed. Antenna moderate, in ♂ bipectinate with moderate branches, apically merely somewhat dentate, ciliated; in ♀ minutely ciliated. Pectus somewhat hairy. Femora glabrous. Hindtibia in ♂ dilated with hair-pencil (except in *didita*), in both sexes with all spurs. Abdomen not crested. Frenulum in ♂ short, moderate to weak, from before well-marked basal expansion; in ♀ wanting. Forewing with costa scarcely arched, apex pronounced or acute,

termen usually straight, tornus well expressed, cell nearly one-half, DC^1 incurved, SC^1 from cell, sometimes free, usually anastomosing with C, SC^2 normal, sometimes anastomosing with SC^1, R^1 usually short-stalked or connate (in *didita* well separate), R^2 usually from well above middle of DC, M^1 separate: hindwing with apex rounded, termen rounded, or very faintly elbowed at R^3 (in *tetraspila* angled), cell less than one-half, DC^3 incurved, C approximated (sometimes very closely) to cell to less than one-half, then rapidly diverging, SC^2 stalked, R^2 very characteristic, M^1 separate (not remote), or more rarely connate or extremely short-stalked. ♂ genitalia: uncus parallel, with socii, gnathos strong, pointed, harpe with sacculus pointed; penis pestillate, vesica covered with minute cornuli; eighth sternite terminating in two blunt points; coremata present; perhaps related to the *Iodis*-group.

Early stages apparently undescribed. A few of the larvae are known, and are attached to *Acacia*, *Duboisia*, etc.

A very natural genus, with the probable exception of the single African species which we have been compelled, for lack of salient differential characters, to lodge here provisionally. In addition to the several distinctions noted in our Key, *Chlorocoma* normally differs from *Omphax*, *Heterorachis* and *Heteresthes* in the dilated ♂ hindtibia: its palpus, though short, is usually stout, and is seldom (perhaps only in *tachypora*) positively minute, whereas in the other genera it is slender and often minute: the antennal structure is much more stable: in the hindwing M^1 is never *widely* separated at its origin from R^3.

Type of the genus: *Chlorocoma dichloraria* (Guenée) = *Chlorochroma dichloraria*, Guenée (1910).

Geographical distribution of species. — Australia, ? S. Africa.

1. *C. dichloraria* (Guenée). — E. and S. E. Australia with Tasmania.

Chlorochroma dichloraria, Guenée, Spec. Gen. Lép. Vol. 9, p. 305, t. 6, f. 8 (1858).
Chlorochroma vertumnaria, Guenée, ibidem, p. 365 (1858) (ab.) [1].
Geometra submissaria, Walker, List Lep. Ins. Brit. Mus. Vol. 22, p. 529 (1861).
Iodis dichloraria, Meyrick, Proc. Linn. Soc. N. S. Wales [2], Vol. 2, p. 884 (1888).
Iodis vertumnaria, Meyrick, ibidem, p. 885 (1888).
Euchloris vertumnaria, Turner, Trans. Roy. Soc. S. Austral. Vol. 28, p. 222 (1904).
Chlorocoma dichloraria, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 35, p. 584 (1910).

2. *C. cadmaria* (Guenée). — S. E. to W. Australia.

Chlorochroma cadmaria, Guenée, Spec. Gén. Lép. Vol. 9, p. 305 (1858).
Chlorochroma vulnerata, Butler, Ann. Mag. Nat. Hist. (5), Vol. 9, p. 91 (1882).
Iodis cadmaria, Meyrick, Proc. Linn. Soc. N. S. Wales [2], Vol. 2, p. 886 (1888).
Chlorocoma cadmaria, Turner, ibidem, Vol. 35, p. 583 (1910).

3. *C. carenaria* (Guenée). — Tasmania (? etc.).

Chlorochroma carenaria, Guenée, Spec. Gén. Lép. Vol. 9, p. 306 (1858).
Chlorochroma congenita, Walker, List Lep. Ins. Brit. Mus. Vol. 22, p. 564 (1861) (nov. syn.) [2].
Chlorochroma vertumnaria var. (?), Walker, List Lep. Ins. Brit. Mus. Vol. 22, p. 562 (1861).
? *Iodis carenaria*, Meyrick, Proc. Linn. Soc. N. S. Wales [2], Vol. 2, p. 881 (1888).

4. *C. externa* (Walker). — S. E. and S. Australia, with Tasmania.

Chlorochroma externa, Walker, List Lep. Ins. Mus. Vol. 22, p. 564 (1861).
Iodis externa, Meyrick, Proc. Linn. Soc. N. S. Wales [2], Vol. 2, p. 885 (1888).
Chlorochroma externa, Turner, ibidem, Vol. 35, p. 585 (1910).

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1) This synonymy is according to Turner. In coll. Brit. Mus., *externa*, Walker, stands as *vertumnaria*; unfortunately Guenée's description is somewhat equivocal.

2) This is in accordance with coll. Brit. Mus., and is fully supported by Guenée's description which cannot possibly apply to *carenaria*, Turner (No. 20, infra). The present insect may possibly be another form of *dichloraria*, to which Turner has referred *congenita*.

5. *C. dilatata* (Walker). — ?S. Africa 1).
Thalera dilatata, Walker, List Lep. Ins. Brit. Mus. Vol. 22, p. 594 (1861).

6. *C. neptunus* (Butler). — Queensland.
Chlorochroma neptunus, Butler, Trans. Ent. Soc. Lond. p. 435 (1886).
Iodis neptunus, Meyrick, Proc. Linn. Soc. N. S. Wales (2), Vol. 2, p. 881 (1888).
Chlorocoma neptunus, Turner, ibidem, Vol. 35, p. 587 (1910).

7. *C. stereota* (Meyrick). — Victoria.
Iodis stereota, Meyrick, Proc. Linn. Soc. Lond. N. S. Wales (2), Vol. 2, p. 875 (1888).
Chlorocoma stereota, Turner, ibidem, Vol. 35, p. 587 (1910).

8. *C. halochlora* (Meyrick). — S. Australia.
Iodis halochlora, Meyrick, Proc. Linn. Soc. N. S. Wales (2), Vol. 2, p. 878 (1888).
Chlorocoma halochlora, Turner, ibidem, Vol. 35, p. 585 (1910).

9. *C. melocrossa* (Meyrick). — Pl. 4, Fig. 9. — E. to S. Australia.
Chlorochroma carenaria, Walker, List Lep. Ins. Brit. Mus. Vol. 22, p. 562 (1861) (nec Guenée).
Chlorochroma citrolimbaria, Walker, ibidem, p. 562 (1861) (nec Guenée).
Iodis melocrossa, Meyrick, Proc. Linn. Soc. N. S. Wales (2), Vol. 2, p. 879 (1888).
Iodis submissaria, Meyrick, ibidem, p. 882 (1888) (nec Walker).
Euchloris xuthocrania, Turner, Trans. Roy. Soc. S. Austral. Vol. 30, p. 127 (1906).
Chlorocoma melocrossa, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 35, p. 586 (1910).

10. *C. asemanta* (Meyrick). — W. Australia.
Iodis asemanta, Meyrick, Proc. Linn. Soc. N. S. Wales (2), Vol. 2, p. 879 (1888).
Chlorocoma asemanta, Turner, ibidem, Vol. 35, p. 587 (1910).

11. *C. paraphylla* (Lower) (præc. var. ?). — N. W. Australia.
Euchloris paraphylla, Lower, Trans. Roy. Soc. S. Austral. Vol. 26, p. 229 (1902).

12. *C. monocyma* (Meyrick) (huj. gen. ?). — W. Australia.
Iodis monocyma, Meyrick, Proc. Linn. Soc. N. S. Wales (2), Vol. 2, p. 883 (1888).
Chlorocoma monocyma, Turner, ibidem, Vol. 35, p. 585 (1910).

13. *C. assimilis* (Lucas). — E. and W. Australia.
Iodis assimilis, Lucas, Proc. Linn. Soc. N. S. Wales (2), Vol. 3, p. 1265 (1888).
Iodis commoda, Lucas, ibidem (2), Vol. 7, p. 252 (1892) (ab.).
Chlorocoma assimilis, Turner, ibidem, Vol. 35, p. 585 (1910).

14. *C. ipomopsis* (Lower) (huj. gen. ?). — S. Australia.
Iodis ipomopsis, Lower, Trans. Roy. Soc. S. Austral. Vol. 15, p. 14 (1891).

15. *C. tetraspila* (Lower). — S. E. Australia, with Tasmania.
Euchloris tetraspila, Lower, Trans. Roy. Soc. S. Austral. Vol. 25, p. 66 (1901).
Chlorocoma tetraspila, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 35, p. 586 (1910).

16. *C. periphracta* (Turner). — Queensland.
Euchloris periphracta, Trans. Roy. Soc. S. Austral. Vol. 28, p. 219 (1904).
Chlorocoma periphracta, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 35, p. 586 (1910).

17. *C. rhodocrossa* (Turner). — W. Australia.
Euchloris rhodocrossa, Turner, Trans. Roy. Soc. S. Austral. Vol. 30, p. 128 (1906).
Chlorocoma rhodocrossa, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 35, p. 583 (1910).

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1) Walker's type is labelled as from S. Africa, but has so entirely the structure and facies of the Australian species that we suspect a mistake, especially as it has never been matched from the African continent. The specimen is said to be from Dr. Andrew Smith, and as Macleay was at one time working at Dr. Smith's collection, and had emigrated to Tasmania before the date (1844) when the British Museum received the specimen, such a mistake as we have suggested seems quite feasible. It may be a large faded example of *assimilis*, or some other known species with which we are not very familiar.

18. *C. rhodoloma*, Turner. — W. Australia.
Chlorocoma rhodoloma, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 35, p. 583 (1910).

19. *C. tachypora*, Turner. — Queensland.
Chlorocoma tachypora, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 35, p. 587 (1910).

20. *C. ochroneurodes*, nov. nom., Prout. — S. E. Australia, with Tasmania.
Chlorocoma carenaria, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 35, p. 584 (1910) (nec Guenée).

21. *C. didita* (Walker) (huj. gen.?) [1]. — Cape.
Iodis didita, Walker, List Lep. Ins. Brit. Mus. Vol. 22, p. 542 (1861).

140. Genus HETERESTHES, Warren

Heteresthes. Warren, Novit. Zool. Vol. 9, p. 354 (1902).

Characters. — Face smooth, narrow. Palpus short and rather slender, second joint shortly scaled, third joint in both sexes small. Tongue weak. Antenna rather short, in both sexes bipectinate nearly to apex with long, decreasing branches. Pectus strongly hairy. Femora hairy. Hindtibia in ♂ not dilated, in both sexes with four rather stout, nearly equal spurs. Abdomen not crested. Frenulum in ♂ rather slender, from before slight basal expansion, in ♀ wanting. Forewing with costa strongly arched, apex minutely falcate, termen with a slight concavity beneath apex, thence somewhat convex, oblique, cell less than one-half, DC very deeply inbent, very oblique posteriorly, SC^1 from cell, free or touching C at a point, SC^2 normal, R^1 stalked, R^2 above middle, M^1 well separate; hindwing with apex rounded, termen entire, slightly rounded, tornus pronounced, cell less than one-half, DC^3 incurved, very strongly oblique posteriorly, C approximated to cell to rather less than one-half, SC^2 stalked, R^2 characteristic, M^1 well separate.

Early stages unknown.

A superficial similarity between this genus and *Tanaorhinus* is not supported by the structure.

Type of the genus : *Heteresthes subrubra*, Warren.

Geographical distribution of species. — Solomon Islands.

1. *H. subrubra*, Warren. — Solomons.
Heteresthes subrubra, Warren, Novit. Zool. Vol. 9, p. 354 (1902).

2. *H. subaureata*, Warren (præc. ♂ ?). — Solomons.
Heteresthes subaureata, Warren, Novit. Zool. Vol. 9, p. 354 (1902).

141. Genus HETERORACHIS, Warren

Heterorachis. Warren, Novit. Zool. Vol. 5, p. 234 (1898).

Characters. — Face smooth. Palpus in both sexes minute (less so in *lunatimargo*). Tongue weak. Antenna in both sexes bipectinate to three-fourths, apex simply ciliated. Pectus slightly hairy.

1) May be phylogenetically an independent development of *Prasinocyma*, with shortened third joint of palpus, or the parent of *Syndromodes*, without the anastomosis of C of hindwing. Slightly different in shape from true *Chlorocoma*, and with the small structural distinctions noted under our generic diagnosis.

Femora glabrous. Hindtibia in ♂ not dilated, in both sexes with four rather approximated spurs. Abdomen often with small crests. Frenulum in ♂ arising from before basal expansion, in ♀ wanting. Forewing with costa slightly arched, apex moderate, termen oblique, little curved, cell not quite one-half, DC^3 oblique posteriorly, SC^1 from cell or stalked, usually anastomosing with C, SC^2 normal, very rarely anastomosing with SC^1, R^1 usually approximated, occasionally connate or minutely stalked, R^2 from well above middle, M^1 separate, connate or short-stalked; hindwing with termen rounded, or excised between R^1 and R^3 (in *lunatimargo* angled at R^3 only), tornus moderate, cell not quite one-half, DC^3 oblique posteriorly, C anastomosing with cell at a point near base (except Section III), SC^2 stalked, M^1 connate, approximated or short-stalked (in Section III well separate).

Early stages unknown.

Nearly akin to *Omphax*, differing chiefly in the pectinate ♀ antenna.

Type of the genus : *Heterorachis devocata* (Walker) = *Geometra devocata*, Walker (1898).

Geographical distribution of species. — Æthiopian.

SECTION I. — Forewing with SC^1 from cell, hindwing with termen rounded; antennal pectinations moderately long.

1. *H. devocata* (Walker). S. Africa.
Geometra devocata, Walker, List Lep. Ins. Brit. Mus. Vol. 22, p. 514 (1861).
Heterorachis devocata, Warren, Novit. Zool. Vol. 5, p. 235 (1898).

2. *H. diaphana* (Warren). Madagascar.
Prasinocyma diaphana, Warren, Novit. Zool. Vol. 6, p. 291 (1889).

3. *H. asyllaria* (Swinhoe). Madagascar.
Prasinocyma asyllaria, Swinhoe, Trans. Ent. Soc. Lond. p. 545 (1904).

SECTION II. — Forewing with SC^1 stalked; hindwing angled at R^3; antennal pectinations short (huj. gen.?).

4. *H. malachitica* (Saalmüller) (hic ponenda?). Madagascar.
Phorodesma malachitica, Saalmüller, Ber. Senckenb. Nat. Ges. 1879-80, p. 291 (1880).
Racheospila malachitica, Saalmüller, Lep. Madag. (2), p. 496, t. 14, f. 270 (1891).
Heterorachis (?) *malachitica*, Warren, Novit. Zool. Vol. 5, p. 235 (1898).

5. *H. lunatimargo* (Prout). W. Africa.
Antharmostes (?) *lunatimargo*, Prout, The Entomologist, Vol. 44, p. 28 (1911).

SECTION III. — Forewing with SC^1 from cell; hindwing excised between R^1 and R^3; antennal pectinations long; hindwing with C approximated to cell for a short distance (huj. gen.??) 1).

6. *H. triangularia* (Swinhoe) 2). Madagascar.
Phorodesma triangularia, Swinhoe, Trans. Ent. Soc. Lond. p. 551 (1904).

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1) Affinities quite uncertain. From the facies and texture it might possibly be assumed that the species here placed has more connection with the *Bathycolpodes*-group.

2) *Phorodesma triangularis* on type label.

142. Genus CELIDOMPHAX, nov. gen., Prout

Celidomphax, nov. gen. Prout.

Characters. — Face smooth. Palpus short (scarcely, if at all, longer than diameter of eye), second joint somewhat rough-scaled, third joint in both sexes small, smooth. Tongue present. Antenna somewhat over one-half, in ♂ bipectinate with long branches, in ♀ nearly simple. Pectus hairy. Hindtibia in both sexes with all spurs. Abdomen with a series of well-developed dorsal crests. Frenulum in ♂ from before basal expansion, in ♀ wanting. Wings ample, vermiculated. Forewing with costa arched distally, apex moderate, termen oblique, rather straight anteriorly, more curved posteriorly, cell not quite one-half, DC incurved, SC^1 from cell, free, SC^2 normal, R^1 very shortly stalked, M^1 approximated; hindwing with termen rounded, tornus moderate, cell less than one-half, DC scarcely curved, only slightly oblique, C approximated to cell for some distance, then rather rapidly diverging, SC^2 stalked, M^1 stalked.

Early stages unknown.

Aspect rather of *Cheroscelis* or of *Metacineta* than of *Omphax*; its actual affinities are somewhat doubtful. The two species are very closely related.

Type of the genus : *Celidomphax rubrimaculata* (Warren) = *Phorodesma rubrimaculata*, Warren.

Geographical distribution of species. — S. E. to E. Africa.

1. *C. rubrimaculata* (Warren). Natal.
   Phorodesma rubrimaculata, Warren, Novit. Zool. Vol. 12, p. 385 (1905).
2. *C. analiplaga* (Warren). German E. Africa.
   Agraptochlora analiplaga, Warren, Novit. Zool. Vol. 12, p. 384 (1905).

143. Genus OMPHAX, Guenée

Omphax. Guenée, Spec. Gén. Lép. Vol. 9, p. 368 (1858).
Agraptochlora. Warren, Novit. Zool. Vol. 1, p. 389 (1894).
Pycnodontia. Warren, ibidem. Vol. 8, p. 206 (1901).

Characters. — Face smooth. Palpus in both sexes minute (very rarely as long as diameter of eye), shortly rough-scaled (Pl. 5, Fig. 14). Tongue slender. Antenna rather short, in ♂ either thick, nearly simple (lamellate) or bipectinate with short branches; in ♀ nearly simple, slightly lamellate. Pectus hairy. Femora slightly hairy. Hindtibia in ♂ not dilated, in both sexes with all spurs developed. Abdomen typically with two or three very small crests, sometimes uncrested. Frenulum in ♂ present, from before some basal expansion, in ♀ wanting. Build rather robust, veins often thick (but see Section III). Forewing with costa arched (in *lacoti* straight), apex acute, in ♀ even minutely subfalcate, termen straight, usually becoming curved posteriorly, cell about one-half, DC^3 somewhat inbent, then very oblique outwards, SC^1 from cell, anastomosing strongly or slightly with C, or free, SC^2 normal, sometimes anastomosing shortly or strongly with SC^1 and very exceptionally with SC^{3+1}, R^1 usually approximated, rarely stalked, R^2 from much above middle of DC, M^1 usually widely separate; hindwing with costa not short, apex moderate, termen gently rounded, never strongly convex, tornus moderate or pronounced, cell one-half or (usually) less, DC^3 inbent (usually strongly), then very oblique outwards, C approximated to cell for a short or moderate

distance, sometimes with point-anastomosis, divergence usually rather gradual, SC^2 stalked. R^2 from very near R^1, M^1 usually widely separate (short-stalked in *nigricornis*) (**Pl. 4, Fig. 14**). ♂ genitalia (*bacoti*) with uncus hooded, gnathos terminating in a long blunt arm, harpe with finely spined clasper, penis pestillate, sharply angulated in the centre, terminating in two dentate arms. Suggests more resemblance to *Pseudoterpna* than to any other genus investigated, but the two genera — so far as is yet known — have little else in common.

Larva. — Probably of the stiff, green, twig-like type, with two anterior projections from prothorax above head. (See Fawcett, *Trans. Zool. Soc. Lond.* Vol. 17, t. 8, f. 6, 7, as « *Euchloris devocata* », but almost certainly an *Omphax*.)

Pupa. — Brown, wing-cases paler, veined with brown, segment-incisions distinct, spiracular spots large, black (Fawcett, loc. cit. fig. 8).

We have not seen Guenée's type (locality unknown), but from his diagnosis, and information kindly given by M. Oberthür, it is certainly identical with, or very close to *rubriplaga*, Warren, from which (with its nearest relatives) we have diagnosed the genus. Robuster than *Rhadinomphax*, C of hindwing not anastomosing; palpus usually still minuter, abdomen commonly with small crests, forewing usually more ample.

Type of the genus : *Omphax plantaria*, Guenée (1858).

Geographical distribution of species. — Æthiopian.

Section I. — Antenna in ♂ not bipectinate.

1. *O. plantaria*, Guenée. — S. and E. Africa.
   Omphax plantaria, Guenée, Spec. Gén. Lép. Vol. 9, p. 368 (1858).
   ? *Agraptochlora rubriplaga*, Warren, Novit. Zool. Vol. 4, p. 33 (1897).
2. *O. subaspersa* (Warren). — S. to E. Africa.
   Agraptochlora subaspersa, Warren, Novit. Zool. Vol. 1, p. 390 (1894).
3. *O. marginata* (Warren). — S. Africa.
   Agraptochlora marginata, Warren, Novit. Zool. Vol. 1, p. 390 (1894).
   ? *Euchloris devocata*, Fawcett, Trans. Zool. Soc. Lond. Vol. 17, p. 184, t. 8, f. 5-8 (1903) (nec Walker).
4. *O. modesta* (Warren). — S. Africa.
   Agraptochlora modesta, Warren, Novit. Zool. Vol. 4, p. 32 (1897).
5. *O. apicata* (Warren). — German E. Africa.
   Pycnodontia apicata, Warren, Novit. Zool. Vol. 8, p. 206 (1901).
6. **O. bacoti, nov. sp.** [1]. Prout. — S. Africa.

Section II. — Antenna in ♂ shortly bipectinate.

7. *O. vicinitaria* (Wallengren) (huj. gen. ?). — S. Africa.
   Iodis vicinitaria, Wallengren, Wien. Ent. Monatschr. Vol. 7, p. 150 (1863).

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1) **Omphax bacoti, nov. sp.** — ♂ ♀. 34 to 36 mm. Face red, mixed with ochreous below. Palpus ochreous, mixed with red. Legs ochreous, red on upper side except hindtibia and tarsus. Head green, narrowly ochreous (red marked) between the antennæ. Antenna quite short, thick, lamellate, scaled area ochreous mixed with red. Thorax green above, whitish beneath. Abdomen whitish; crests wanting. Wings long and narrow, formed almost like *Rhadinomphax virencta*, but more robust. Forewing green nearly as in that species, but rougher, costal edge narrowly pale ochreous; fringe cream-colour, tipped with pink. Hindwing white, sometimes strongly tinged with green in inner-marginal half; fringe white, not tipped with pink except towards tornus. Underside whitish, tinged with ochreous, especially at costa of both wings; the greater part of forewing (except termen and inner margin) sometimes with a slight smoky suffusion. Durban (E. A. Bacot). Type and two cotypes (all ♂) in coll. L. B. Prout. Pretoria, 19th December, 1910 (Dr Breyer), a ♀; Transvaal, (C. H. Pead), a ♂; both in coll. Brit. Mus. Barberton, Transvaal, 26th December, 1910, a ♀ in coll. A. J. T. Janse. Two ♂ from S. Africa in coll. Oxford Mus. Structure quite as in *Rhadinomphax*, excepting the robust build and the non-anastomosis of C of the hindwing. It probably forms at least a separate section of *Omphax*, differing in shape and lack of crests; perhaps even a genus. In the type specimen SC^1 of left forewing approaches successively C and SC^2 without anastomosing; on the right wing it anastomoses at a point with C. In most examples it anastomoses slightly or strongly with both C and SC^2.

8. *O. nigricornis* (Warren). — Mombasa Island.
Agraptochlora nigricornis, Warren, Novit. Zool. Vol. 4, p. 208, t. 5, p. 14 (1897).

9. *O. rubriceps* (Warren). — Angola.
Agraptochlora rubriceps, Warren, Novit. Zool. Vol. 11, p. 464 (1904).
? *Euproctis monophyes*, Swinhoe, Ann. Mag. Nat. Hist. (7), Vol. 17, p. 541 (1906) (huj. gen. certo).

10. *O. rhodocera* (Hampson). — Rhodesia.
Prasinocyma rhodocera, Hampson, Proc. Zool. Soc. Lond. p. 475, t. 39, f. 29 (1910) 1).

11. **O. leucocraspeda, nov. sp.** 2), Prout. — Transvaal, Mashonaland.

Section III. — Build slender (♂ unknown) (huj. gen.?).

12. *O. anomala* (Warren). — British East Africa.
Omphacodes (?) *anomala*, Warren, Novit. Zool. Vol. 9, p. 495 (1902).
Comostolopsis (?) *anomala*, Swinhoe, Trans. Ent. Soc. Lond. p. 586 (1904).

144. Genus PROSOMPHAX, Warren

Prosomphax. Warren, Ann. S. Afric. Mus. Vol. 10 (1), p. 20 (1911).

Characters. — Face smooth. Palpus very short. Tongue slight. Antenna in ♂ bipectinate to two-thirds (in ♀ simple, *quieta*). Hindtibia in ♂ not dilated, in both sexes with terminal spurs only. Abdomen not crested. Frenulum in ♂ slight, in ♀ wanting. Forewing triangular, with costa nearly straight, shouldered at extreme base and arched distally, apex prominent, termen straight, oblique, cell one-half, SC^1 from cell, anastomosing with C, SC^2 normal, R^1 stalked, R^2 from near apex of cell, M^1 approximated at origin to R^3; hindwing with apex and termen rounded, tornus pronounced, C approximated to SC for some distance, but not anastomosing, SC^2 short-stalked with R^1.

Early stages unknown.

Certainly related to *Omphax* and *Rhadinomphax*, but distinguished by the absence of median spurs. We have not been able to study Warren's type species, but have quoted the characters given by him, merely making one or two additions from *quieta* which will certainly be found applicable.

Type of the genus : *Prosomphax callista*, Warren.

Geographical distribution of species. — S. Africa, ? British E. Africa.

1. *P. callista*, Warren. — Cape.
Prosomphax callista, Warren, Ann. S. Afric. Mus. Vol. 10 (1), p. 20 (1911).

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1) The type is a ♂, not « ♀ » as described.

2) **Omphax leucocraspeda, nov. sp.** — ♂ ♀, 30-36 mm. Face and palpus crimson, the latter in ♂ minute, in ♀ nearly equal to diameter of eye. Vertex white, tinged with ochreous, occiput green, side of collar red. Antennal shaft ochreous-whitish proximally, more ochreous distally, pectinations in ♂ ochreous. Legs ochreous below, mostly crimson above. Thorax and base of abdomen green dorsally, abdomen otherwise white, the green continuing narrowly (and somewhat interrupted) on dorsum of segments 3-4. Wings bright green, irrorated with whitish; costal edge of forewing narrowly pale ochreous, no lines or spots, fringes whitish, slightly tinged with ochreous, their extreme bases mixed with green. Underside slightly paler, costal edge of forewing ochreous as far as SC, in basal half usually tinged with red. Transvaal: Kranspruit, 19 Dec. 1906 (type ♂) and 21 Dec. 1906 (♂), Rietfontein, 7 Dec. 1904 (♀), Boltfontein, 8 Jan. 1907 (♀), all from A. J. T. Janse; Salisbury, Mashonaland, Aug. 1900 (♀), G. A. K. Marshall; Mashonaland (♀) H. B. Dobbie. All these specimens are in coll. Brit. Mus. Also a ♀ from Kranspruit, 22 Dec. 1906, in coll. L. B. Prout, and one from Pretoria, 5 Dec. 1907, in coll. A. J. T. Janse. In one exanple SC^1 of forewing is free, in the rest it anastomoses with C, in three also with SC^2. The structure is typical except in the absence of crests; DC^3 of both wings excessively oblique.

2. **P. quieta, nov. sp.** 1), Prout (huj. gen.?). British E. Africa.
Omphacodes anomala, Swinhoe, Trans. Ent. Soc. Lond. p. 552 (1904 (nec Warren).

145. Genus RHADINOMPHAX, nov. gen., Prout

Rhadinomphax, nov. gen. Prout.
Omphacodes (part.). Warren, Novit. Zool. Vol. 1, p. 396 (1894) (nec sect. typ.).

Characters. — Face smooth. Palpus in both sexes small (scarcely as long as diameter of eye), second joint shortly scaled, third joint not elongate. Tongue present. Antenna in ♂ subdentate, or with strong, clawed teeth, shortly ciliated, in ♀ minutely ciliated. Pectus slightly hairy. Femora glabrous. Hindtibia in ♂ not dilated, in both sexes with all spurs. Abdomen not crested. Frenulum in ♂ arising from before basal expansion, in ♀ wanting. Forewing triangular, rather narrow, costa nearly straight, apex moderately acute, termen nearly straight, oblique, cell about one-half, DC^3 deeply incurved, very oblique posteriorly, SC^1 from near end of cell, anastomosing quickly with C, SC^2 normal, anastomosing strongly with SC^1 and quite exceptionally also with SC^{3-4}, R^1 connate or short-stalked, R^2 from above middle of DC, M^1 well separate; hindwing with costa long, apex rounded, termen rather straight, tornus moderate, cell about one-half, DC^3 deeply inbent (usually inangled), strongly oblique below, C anastomosing to near end of cell, SC^2 stalked, R^2 very characteristic, M^1 well separate.

Early stages unknown.

Nearly akin to *Dichroma*, but of somewhat more slender build, with SC^2 of forewing normal, and with non-pectinate ♂ antenna. Warren evidently drew up his characterization of *Omphacodes* from this genus, but chose as type *directa*, Walker, which is abundantly distinct and must of course bear the name.

Type of the genus : *Rhadinomphax divincta* (Walker) = *Iodis divincta*, Walker.

Geographical distribution of species. — S. Africa.

1. *R. divincta* (Walker). Cape.
Iodis divincta, Walker, List Lep. Ins. Brit. Mus. Vol. 22, p. 543 (1861).
Omphax (?) *frondinata*, Felder, Reise Novara, Lep. Het. t. 127, f. 2, 3 (1875).
2. *R. pudicata* (Walker). Cape.
Iodis pudicata, Walker, List Lep. Ins. Brit. Mus. Vol. 35, p. 1606 (1896).
3. *R. sanguinipuncta* (Felder). Cape.
Omphax (?) *sanguinipuncta*, Felder, Reise Novara, Lep. Het. t. 127, f. 1 (1875).
4. *R. trimeni* (Felder). Cape.
Omphax (?) *trimeni*, Felder, Reise Novara, Lep. Het. t. 127, f. 4 (1875).

146. Genus DICHROMA, Westwood

Dichroma. Westwood, Duncan's Exot. Moths, p. 224 (1841).

Characters. — Face smooth. Palpus in both sexes little longer than diameter of eye, moderately

1) **Prosomphax** (?) **quieta, nov. sp.** — ♀, 35 mm. Face and palpus ochreous red, paler below. Vertex green, paler between antennæ. Antenna pale ochreous. Thorax pale green above. Legs pale ochreous. Abdomen white. Forewing pale green, unmarked; costal edge narrowly pale ochreous; fringe pale green in proximal half, white in distal. Hindwing greenish white, unmarked. Underside white, of forewing slightly tinged with green, especially in costal half; costa of forewing as above. Machakos, British E. Africa, 7 July, 1898 (R. C. Crawshay). Type in coll. Brit. Mus. Placed provisionally in this genus; the costa of forewing may be slightly more arched; the cells are shorter, hence there are more stalkings, SC^4 of forewing being shortly stalked (though still arising before R^1), M^1 of both wings stalked and SC^5 of hindwing longer-stalked; SC^4 of forewing does not anastomose with C.

strong, second joint somewhat rough-scaled, third joint small, concealed. Tongue present. Antenna scarcely one-half, in ♂ shortly bipectinate (the branches scarcely longer than diameter of shaft), apex nearly simple; in ♀ nearly simple. Pectus hairy. Femora glabrous; hindtibia in ♂ not dilated, in both sexes with four well-developed spurs. Abdomen rather long, not crested. Frenulum in ♂ moderately strong, from before basal expansion, retinaculum near base; ♀ frenulum wanting. Forewing with costa straight, termen curved, strongly oblique, tornus rounded, cell about one-half, DC very deeply incurved, SC^1 anastomosing (usually strongly) with C, SC^2 very short-stalked (usually arising before R^1), anastomosing with SC^1 (usually strongly), R^1 stalked, R^2 from near R^1, M^1 separate; hindwing rather narrow, costa long, apex rounded, termen somewhat rounded, becoming straighter towards tornus, cell about one-half, DC rather deeply incurved, C anastomosing to near end of cell, SC^2 stalked, R^2 characteristic, M^1 separate.

Early stages unknown.

Notable for the curious position of SC^2 of forewing, which is more primitive than in any other genus except in Group 1. When not before R^1 it arises only just after it.

Type of the genus : *Dichroma equestralis,* Westwood (1841).

Geographical distribution of species. — S. Africa.

1. *D. equestralis,* Westwood. Cape.

Dichroma equestralis, Westwood, Duncan's Exot. Moths, p. 224, t. 30, p. 1 (1841).
Argyrophora equestrinaria, Guenée, Spec. Gén. Lep. Vol. 10, p. 232 (1858).

Note. — The other species placed by Westwood under this genus, *Dichroma histrionalis* (*trifonia*, Cramer) and *arcualis* (*trifonia* ab. ?) belong to the *Geometrinae* (*Boarmiinae*). The former, under its synonym *monetata*, Guenée, is the type of Guenée's genus *Argyrophora*, which will stand for the species in question 1); the position assigned to it by Guenée, near the genus *Compsoptera*, Blanchard (*Ligia*, Duponchel, nom. præocc.), may likely be correct. *Dichroma alternata*, Warren, *Novit. Zool.* Vol. 8, p. 209, is Larentiid, close to *Conchylia;* Weymer, *Deutsche Ent. Zeitschr.* 1908, p. 512, proposed for it (under the synonym *argenteofasciata*) the genus *Callythria*.

147. Genus ARGYROGRAPHA, nov. gen., Prout

Argyrographa, nov. gen. Prout.

Characters. — Face smooth. Palpus in ♂ moderate, second joint rough-scaled above and beneath, reaching well beyond frons, third joint minute (♀ unknown). Tongue slender. Antenna in ♂ bipectinate with moderately long branches, apical part nearly simple. Pectus and femora hairy. Hindtibia and tarsus in ♂ rough-scaled, tibia not dilated, all spurs present, tarsus as long as tibia. Abdomen not crested. Frenulum in ♂ slender and colourless, from before basal expansion. Forewing with costa very feebly arched, apex rather acute, termen smooth, oblique, curved posteriorly, cell fully one-half, DC somewhat incurved, SC^1 from cell, sometimes anastomosing with C, SC^2 from close after R^1, anastomosing with SC^1, R^1 short-stalked, M^1 separate; hindwing with costa rather long, apex rounded, termen gently rounded, tornus rather pronounced, cell one-half, DC somewhat incurved, C approximated to cell to about one-half, rather gradually diverging, SC^2 stalked, M^1 separate.

Early stages unknown.

1) Kirby, *Handb. Lep.* Vol. 5, p. 243, says of *Argyrophora* « nom præocc. », but we cannot find that this is the case: probably he was confounding it with *Argyrophorus*, Blanchard, 1852

The differences from *Comibaena*, except the narrower wings and more *Dichroma*-like facies, are perhaps rather slight, yet sufficient; the rough-scaled hindleg, yet without the dilation and process, the anastomosis of SC^2 of forewing and the longer approximation of C of hindwing to cell are all distinctive.

Type of the genus : *Argyrographa moderata* (Walker) = *Dichroma* (?) *moderata*, Walker.

Geographical distribution of species. — S. Africa.

1. *A. moderata* (Walker). Cape.

Dichroma (?) *moderata*, Walker, List Lep. Ins. Brit. Mus. Vol. 24, p. 1147 (1862).

Euchloris eximiata, Felder, Reise Novara, Lep Het. t. 127, f. 5 (1875).

148. Genus PARAPRASINA, Warren

Paraprasina. Warren, Novit. Zool. Vol. 4, p. 43 (1897).

Characters. — Face smooth. Palpus in ♂ moderate, in ♀ long, second joint with long projecting scales, third joint smoother-scaled, in ♀ rather long. Tongue wanting. Antenna in ♂ bipectinate nearly to apex, with rather long, decreasing branches; in ♀ very shortly bipectinate. Pectus densely hairy. Femora hairy. Hindtibia in ♂ not dilated, in both sexes with terminal spurs only. Tarsi spinulose. Abdomen not crested, in ♀ very robust. Frenulum in ♂ moderately developed, arising before slight basal expansion, in ♀ vestigial. Forewing with costa arched at base and distally, straight between, apex squared, termen smooth, oblique, little curved, cell about one-half, DC strongly incurved, SC^1 from cell, anastomosing shortly with C or free, SC^2 normal, SC^{3+4} longer-stalked than usual, R^1 stalked, R^2 from well above middle of DC, M^1 separate; hindwing with termen smooth, rounded towards apex, otherwise rather straight, tornus pronounced, cell little less than one-half, DC incurved, C approximated to cell to fully one-half, not very rapidly diverging, SC^2 stalked, R^2 from near R^1, M^1 connate or very short-stalked.

Early stages unknown.

Type of the genus : *Paraprasina discolor*, Warren (1897).

Geographical distribution of species. — S. Africa.

1. *P. discolor*, Warren. — **Pl. 4, Fig. 5.** Cape to Transvaal.

Paraprasina discolor, Warren, Novit. Zool. Vol. 4, p. 43 (1897).

149. Genus MICROLOXIA, Warren

Microloxia. Warren, Proc. Zool. Soc. Lond. p. 354 (1893).

Characters. — Face smooth. Palpus moderate to long, fairly strong, second joint rather long, shortly scaled beneath, third joint smooth, in ♂ small or moderate, in ♀ long. Tongue present (sometimes rudimentary). Antenna in ♂ bipectinate to three-fourths with moderate to long branches, in ♀ serrate-dentate. Pectus moderately hairy. Hindtibia in both sexes with terminal spurs only. Abdomen not crested. Frenulum in ♂ weak, from before strong basal expansion; in ♀ wanting. Forewing with costa not or scarcely arched, apex moderate, termen slightly rounded, moderately oblique, cell nearly one-half, DC somewhat incurved, SC^1 from cell, anastomosing with or running into C (rarely free), SC^2 normal, anastomosing with SC^1, or running into C, or free, R^1 about connate,

M^1 connate or short-stalked; hindwing with termen rounded, tornus moderate, cell somewhat less than one-half, DC little curved, C anastomosing with cell at a point near base, then diverging, SC^2 stalked, R^2 scarcely above middle, M^1 stalked. ♂ genitalia : uncus pointed, with socii of equal length, gnathos atrophied, harpe fused, rounded, with extended sacculus, penis pestillate. Nearer to *Culpinia* and *Thalera* than to the *Hemithea*-group.

Larva. — Rather slender, head bifid, prothorax (and metathorax?) with two small prominences, body somewhat wrinkled transversely, carinated, attenuated anteriorly, surface shagreened with white granules; on *Teucrium*, *Mentha*, etc. (Goossens, *Ann. Soc. Ent. Fr.* 1871, p. 291, t. 4, f. 5; Millière, *Lépidoptérologie*, Fasc. 1, p. 7, t. 2, f. 1).

A small genus, to which has been referred a good deal of heterogenous material. Even as it is here restricted, the species show some variation of facies, and a little in structure; *saturata*, with shorter ♂ palpus and weak tongue (perhaps even wanting), may probably require generic separation, but its ♀ is at present unknown; *menadiara*, of which the type is lost, may be allied thereto, but we are not certain whether the specimen we have seen is conspecific with Thierry-Mieg's. The typical species of *Microloxia* are of quite small size, but relatively fairly robust, and have a good many characters in common with the large African *Paraprasina*.

Type of the genus : *Microloxia herbaria* (Hubner) = *Geometra herbaria*, Hübner (1803).

Geographical distribution of species. — Palaearctic (except N. and E.), India, S. Africa.

1. *M. herbaria* (Hübner). — S. Europe to Central Asia.
   - *Geometra herbaria*, Hubner, Samml. Eur. Schmett., Geom. t. 70, f. 407 (1818?).
   - *Nemoria herbaria*, Hubner, Verz. bek. Schmett. p. 285 (1820?).
   - *Ellopia advolata*, Eversmann, Bull. Soc. Nat. Moscou, 1837, nº 2, p. 51 (1837) (var.?).
   - [*Geometra*] *graminaria* (Kollar, MS.), Zeller, Stett. Ent. Zeit. Vol. 10, p. 204 (1849) nec *Phorodesma graminaria*, Kollar, 1850).
   - *Eucrostis herbaria*, Lederer, Verh. Zool.-bot. Ver. Wien, Vol. 3, p. 172 (1853).
   - *Nemoria herbaria*, Guenee, Spec. Gén. Lep. Vol. 9, p. 350 (1858).
   - *Nemoria advolata*, Guenée, ibidem, p. 350 (1858).
   - *Nemoria bruandaria*, Millière, Ann. Soc. Linn. Lyon (n. s.), Vol. 7, p. 243, t. 8, f. 10-12 (1861).
   - *Microloxia herbaria*, Warren, Proc. Zool. Soc. Lond. p. 354 (1893).
   - *Synchlora bruandaria*, Gumppenberg, Nova Act. Acad. Leop. d. Naturf. Halle, Vol. 64, p. 406 (1895).
2. *M. indecretata* (Walker). — Bombay to Ceylon.
   - *Geometra* (?) *indecretata*, Walker, List Lep. Ins. Brit. Mus. Vol. 20, p. 1555 (1862).
   - *Jodis indecretata*, Moore, Lep. Ceyl. Vol. 3, p. 430, t. 194, f. 5 (1887).
   - *Nemoria prunosa*, Butler, Ann. Mag. Nat. Hist. (5), Vol. 5, p. 224 (1880).
   - *Geometra aperta*, Swinhoe, Proc. Zool. Soc. Lond. p. 855, t. 56, f. 7 (1885).
   - *Nemoria directa*, Hampson, Fauna Ind. Moths, Vol. 3, p. 503 (1895) nec Walker).
   - *Microloxia parvulata*, Warren, in coll. Brit. Mus. nec Walker).
3. *M. leprosa* (Hampson). — Ceylon.
   - *Eucrostis leprosa*, Hampson, Ill. Het. Coll. Brit. Mus. Vol. 9, p. 146, t. 170, f. 15 (1893).
   - *Nemoria leprosa*, Hampson, Fauna Ind. Moths, Vol. 3, p. 503 (1895).
4. *M. menadiara* (Thierry-Mieg) (huj. gen.?). — Algeria.
   - *Phorodesma menadiara*, Thierry-Mieg, Le Naturaliste, Vol. 15, p. 40 (1893).
   - *Eucrostes* (?) *menadiaria*, Staudinger, Cat. ed. 3, p. 263 (1901).
5. *M. ruficornis*, Warren. — S. Africa, ? Sudan.
   - *Microloxia ruficornis*, Warren, Novit. Zool. Vol. 4, p. 42 (1897).
6. *M. saturata* (Bang-Haas) (huj. gen. ?). — Algeria, S. Spain.
   - *Eucrostes saturata*, Bang-Haas, Iris, Vol. 19, p. 137, t. 5, f. 18 (1906).

7. *M. halimaria* (Chrétien). Algeria.
Eucrostes halimaria, Chrétien, Le Naturaliste, Vol. 31, p. 18 (1909).
8. **M. chlorissodes, nov. sp.** 1), Prout. S. E. China.

150. Genus PAMPHLEBIA, Warren

Pamphlebia. Warren, Novit. Zool. Vol. 4, p. 213 (1897).

Characters. — Face smooth. Palpus moderate to long, slender, third joint smooth, elongate, especially in ♀. Tongue present. Antenna in ♂ bipectinate to about two-thirds with moderate branches, in ♀ nearly simple. Pectus slightly hairy. Femora glabrous. Hindtibia in ♂ not dilated, in both sexes with terminal spurs only. Abdomen not crested. Frenulum in ♂ very slender, weak, from before strong basal expansion; in ♀ wanting. Forewing with costa straight, apex acute, termen oblique, little curved, cell short, DC^3 inangled, SC^1 stalked to beyond R^1, anastomosing with C, R^1 stalked, R^2 above middle, M^1 connate or short-stalked; hindwing with apex rather pronounced, termen sharply angled at R^3, rather straight anteriorly and posteriorly, tornus pronounced, cell short, DC^3 more or less inbent, C anastomosing at a point with C, rapidly diverging, SC^2 stalked, M^1 stalked.

Early stages unknown.

An offshoot of *Microloxia*, differing in the stalking of SC^1 of forewing and in the shape of the hindwing.

Type of the genus : *Pamphlebia rubrolimbraria* (Guenée) = *Amaurinia rubrolimbraria*, Guenée (1897).

Geographical distribution of species. — S. India to New Guinea.

1. *P. rubrolimbraria* (Guenée). S. India to New Guinea.
Amaurinia rubrolimbraria, Guenée, Spec. Gén. Lep. Vol. 9, p. 386 (1858).
Thalassodes discrta, Walker, List Lep. Ins. Mus. Brit. Mus. Vol. 22, p. 553 (1861).
Thalassodes simplicitaria, Walker, ibidem, p. 553 (1861).
Nemoria ruficinctaria, Snellen, Veth's Midden-Sumatra, Vol. 4 (8), p. 53 (1880).
Thalassodes rubrolimbataria, Moore, Lep. Ceyl. Vol. 3, p. 427 (1887).
Comostola rubrolimbaria, Meyrick, Trans. Ent. Soc. Lond. p. 492 (1889).
Thalassodes rubrolimbraria, Hampson, Fauna Ind. Moths, Vol. 3, p. 513 (1895).
Pamphlebia rubrolimbaria, Warren, Novit. Zool. Vol. 4, p. 213 (1897).
Pamphlebia rubrolimbaria, ab. *interrupta*, Bastelberger, Ent. Zeit. Stuttgart, Vol. 21, p. 217 (1908) (ab.?). Bismarck Archipelago.

151. Genus EUEANA, nov. gen., Prout

Eueana, nov. gen. Prout.

Characters. — Face smooth. Palpus moderate to long, second joint shortly scaled, third joint smooth, in ♀ greatly elongate. Tongue present. Antenna in ♂ bipectinate to about three-fourths, with

1) **Microloxia chlorissodes, nov. sp.** — ♂, 22 mm. Face dull red. Palpus marked with dull red, especially on outer side and at tip, third joint rather elongate. Vertex green, narrowly white between antennæ. Antennal shaft white proximally; pectinations moderate. Thorax and abdomen green above, the latter somewhat paler. Wings green (somewhat faded, as with moisture). Forewing with costal edge ochreous, not dark-spotted; antemedian line wanting, postmedian extremely faint, scarcely paler than the ground-colour, and scarcely appreciably dark-edged proximally, placed at about 2 mm. from termen, approximately parallel therewith, but sinuous, slightly incurved between R^1 and R^3 and rather more strongly in submedian area; no terminal line; fringe long, concolorous proximally, slightly paler distally. Hindwing similar. Underside whitish green, costal half of forewing slightly more greenish, costal edge as above. Happy Valley, Hong-Kong, March 7th, 1898 (T. B. Fletcher). Type in coll. L. B. Prout, kindly presented by the captor. A second ♂, from Ningpo, June, 1886 (Leech coll.) is in coll. Brit. Mus. A third, almost certainly conspecific, from Kanshirei, Formosa, 23 April, 1908 in coll. Wileman (bearing the registration number 1626 F). In size, shape and colouring this species bears a rather close resemblance to *Chlorissa solidaria*, but of course it is readily distinguished by the structural characters: pectinate antenna, shorter hindtibia, non-abbreviated tarsus and less long inner margin of hindwing. The third joint of palpus is rather longer than in the males of both *solidaria* and typical *Microloxia*. In the forewing SC^1 anastomoses with C, but not with SC^2; in the hindwing R^2 is not so nearly central as in typical *Microloxia*. The hindtibia is moderately dilated, with hair-pencil.

long, decreasing branches, in ♀ nearly simple. Hindtibia in both sexes with terminal spurs only. Abdomen not crested. Frenulum in ♂ short, from before basal expansion, in ♀ wanting. Forewing rather broad, with costa slightly arched, apex moderate, termen gently curved, oblique, cell less than one-half, DC incurved, oblique posteriorly, SC^1 stalked, SC^2 normal, R^1 stalked to beyond SC^1, M^1 separate; hindwing with termen waved, somewhat convex, tornus rather pronounced, cell short, DC^3 very oblique posteriorly, C anastomosing with cell at a point near base, rapidly diverging, SC^2 stalked, M^1 separate.

Egg. — Elliptical, strongly flattened above and below, but rounded, one end depressed from side view; shagreened, scarcely reticulate (Dyar, *Psyche*, Vol. 5, p. 118).

Larva. — Head strongly bilobed, the lobes increasing in sharpness in later stages, becoming conical horns, prothorax high, with two forward-directed prominences; body otherwise without special protuberances, slender, stiff, cylindrical, minutely frosted with white granules, legs short, anal plate pointed cordate. A remarkable mimic of a young twig of its foodplant, *Condalea ferrea* (Dyar, loc. cit., who fully describes the five stages).

Pupa. — Light brown with darker cases and broken dorsal line; in an imperfect net of threads among leaves (Dyar, loc. cit.).

The systematic position of this genus is somewhat uncertain. Except in shape and some minor points of venation, its characters seem to be nearly those of *Pamphlebia*, but it is scarcely likely that, with that genus, it is an offshoot of *Microloxia*. It is on the whole more likely that it springs from the *Oospila*-group, though with several specializations which remove it therefrom in our scheme.

Type of the genus : *Eucana niveociliaria* (Herrich-Schäffer) = *Eucrostis niveociliaria*, Herrich-Schäffer.

Geographical distribution of species. — West Indies to Florida.

1. *E. niveociliaria* (Herrich-Schäffer). — West Indies, Florida.

Eucrostis niveociliaria, Herrich-Schaffer, Corr.-Bl. Zool.-min. Ver. Regensb. Vol. 24, p. 182 (1870).
Eucrostis saltusaria, Hulst, Ent. Amer. Vol. 2, p. 122 (1886).
Racheospila saltusaria, Hulst, Trans. Amer. Ent. Soc. Vol. 23, p. 314 (1896); Holland, Moth Book, p. 336, t. 43, f. 20 (1903).
Racheospila niveociliaria, Dyar, The Canad. Entom. Vol. 40, p. 171 (1908).
Phorodesma niveociliaria Warren MS. Dyar, Proc. Ent. Soc. Wash. Vol. 10, p. 35 (1908).

152. Genus RHODESIA, Warren

Rhodesia. Warren, Novit. Zool. Vol. 12, p. 380 (1905).

Characters. — Face smooth. Palpus in ♂ moderate, in ♀ long, second joint rough-scaled, third joint smooth, distinct, in ♀ long. Tongue slender. Antenna rather short, in ♂ rather strongly bipectinate to beyond two-thirds, in ♀ bipectinate (*alboviridata*) or dentate (*viridalbata*). Pectus and femora hairy. Hindtibia in ♂ not dilated, in both sexes with four well-developed, approximated spurs. Abdomen not appreciably crested. Frenulum in ♂ short, from before basal expansion, in ♀ wanting. Forewing with costa slightly arched, apex moderate, termen slightly curved, oblique, cell less than one-half, DC^3 incurved, SC^1 from cell, anastomosing with C, SC^2 normal, R^1 short-stalked or connate, M^1 approximated; hindwing with apex and termen rounded, tornus moderately pronounced, cell

rather short, DC slightly oblique, C anastomosing to at least one-half cell, SC^2 stalked, M^1 connate or short-stalked.

Early stages unknown.

Type of the genus : *Rhodesia viridalbata*, Warren (1905).

Geographical distribution of species. — Æthiopian.

1. *R. viridalbata*, Warren. — Natal.
   Rhodesia viridalbata, Warren, Novit. Zool. Vol. 12, p. 386 (1905).
2. *R. alboviridata* (Saalmüller). — Madagascar, E. Africa, Ashanti.
   Comibaena alboviridata, Saalmüller, Ber. Senckenb. Nat. Ges. 1879-80, p. 292 (1880).
   Phorodesma alboviridata, Saalmüller, Lep. Madag. (2), p. 495, t. 14, f. 271 (1891).
   Rhodesia alboviridata, Warren, Novit. Zool. Vol. 12, p. 386 (1905).

153. Genus LASIOCHLORA, Warren

Lasiochlora. Warren, Novit. Zool. Vol. 1, p. 389 (1894).

Characters. — Face smooth. Palpus in both sexes short, second joint shortly scaled, third joint smooth, quite small. Tongue present. Antenna bipectinate nearly to apex with longish (♂) or moderate (♀) branches. Pectus somewhat hairy. Hindtibia in ♀ (and probably in ♂) with all spurs. Abdomen typically with small crests. Frenulum in ♂ arising from before well-marked basal expansion, in ♀ wanting. Forewing with costa arched, apex acute, termen straight or very slightly incurved below apex, gently curved posteriorly, cell one-half, DC curved, becoming oblique, SC^1 from cell, anastomosing at a point with C, SC^2 normal, R^1 well removed at origin from SC^{2-5}, R^2 from near R^1, M^1 well separate from R^3; hindwing with costa rather long, termen typically subcrenulate, with a slight tooth at R^3, cell about one-half, DC^3 incurved, C anastomosing to beyond one-half cell, SC^2 connate or very shortly stalked, R^2 from near R^1, M^1 well separate from R^3.

Early stages unknown.

Type of the genus : *Lasiochlora diducta* (Walker) = *Comibaena diducta*, Walker (1894).

Geographical distribution of species. — S. Africa.

1. *L. diducta* (Walker). — Cape to Natal.
   Comibaena diducta, Walker, List Lep. Ins. Brit. Mus. Vol. 22, p. 571 (1861).
   Nemoria (?) lunigera, Felder, Reise Novara, Lep. Het. t. 127, f. 15 (1875).
   Lasiochlora diducta, Warren, Novit. Zool. Vol. 1, p. 389 (1894).
   Geometra diducta, Warren, ibidem, p. 389 (1894).
2. *L. bicolor* (Thierry-Mieg). — Pl. 5, Fig. 6. — Natal.
   Dalima bicolor, Thierry-Mieg, Le Naturaliste, Vol. 29, p. 200 (1907).

154. Genus SYNDROMODES, Warren

Syndromodes. Warren, Novit. Zool. Vol. 4, p. 45 (1897).

Characters. — Face smooth. Palpus in both sexes short and slender, second joint shortly rough-scaled, third joint smooth-scaled, in both sexes quite small. Tongue slight. Antenna in ♂ bipec-

tinate, apically merely dentate; in ♀ serrate-dentate. Pectus somewhat hairy. Femora glabrous. Hindtibia in ♂ not dilated, in both sexes with four strong spurs. Abdomen not crested. Frenulum in ♂ very slender, from before strong basal expansion, in ♀ wanting. Forewing with costa slightly arched, apex rather acute, termen smooth, nearly straight, oblique, cell nearly one-half, DC^3 incurved, SC^1 from cell, anastomosing with C, SC^2 normal, R^1 separate or very shortly stalked, M^1 separate; hindwing with apex and termen rounded, tornus squared, cell somewhat less than one-half, DC^3 incurved, not very oblique, C anastomosing with cell to beyond one-half, SC^2 stalked, M^1 connate or approximated.

Early stages unknown.

Type of the genus : *Syndromodes invenusta* (Wallengren) = *Iodis invenusta*, Wallengren = *Syndromodes unicolor*, Warren (1897).

Geographical distribution of species. — Æthiopian.

1. *S. invenusta* (Wallengren). S. Africa.
   Iodis invenusta, Wallengren, Wien. Ent. Monat-chr. Vol. 7, p. 150 (1863).
   Syndromodes unicolor, Warren, Novit. Zool. Vol. 4, p. 45 (1897) (nov. syn.) [1].
2. *S. dimensa* (Walker) Cape.
   Thalassodes dimensa, Walker, List Lep. Ins. Brit. Mus. Vol. 22, p. 549 (1861).
3. *S. cellulata*, Warren. Natal, Transvaal.
   Syndromodes cellulata, Warren, Novit. Zool. Vol. 5, p. 16 (1898).

155. Genus HIEROCHTHONIA, nov. gen., Prout

Hierochthonia, nov. gen. Prout.

Characters. — Face smooth. Palpus in both sexes quite short and slender, terminal joint very small. Tongue absent. Antenna in ♂ bipectinate to apex, the proximal branches rather long; in ♀ shortly bipectinate. Pectus slightly hairy. Femora glabrous. Hindtibia in both sexes slender, with terminal spurs only. Abdomen not crested. Frenulum in ♂ slender, from before marked basal expansion; in ♂ wanting. Forewing with costa nearly straight proximally, somewhat arched distally, apex rather pronounced, termen nearly straight, oblique, cell not quite one-half, DC^3 somewhat incurved, SC^1 from cell, anastomosing with or running into C, SC^2 normal, R^1 about connate, M^1 just separate. Hindwing with apex and termen rounded, tornus not very pronounced, cell almost one-half, rather broad, DC^3 hardly oblique, C anastomosing to near end of cell (in *alexandraria* only approximated), SC^2 stalked, R^2 from scarcely above middle of discocellulars, M^1 short-stalked.

Early stages unknown.

Type of the genus : *Hierochthonia pulverata* (Warren) = *Microloxia pulverata*, Warren.

Geographical distribution of species. — Western Asia.

1. *H. pulverata* (Warren). Syria.
   Eucrostes olympiaria, ♀, Bohatsch, Verh. Zool.-bot. Ges. Wien, Vol. 20, p. 400 (1870) (nec Herrich-Schaffer).
   Microloxia pulverata, Warren, Novit. Zool. Vol. 8, p. 193 (1901).
   Eucrostes semitaria, Püngeler, Iris, Vol. 14, p. 333 (1902).

1) Warren would have united these but that Wallengren mentions an « areole ». Whatever were Wallengren's species (certainly of this subfamily), that would be an error of observation, or a divergent use of the term.

2. *H. petitaria* (Christoph) (huj. gen.?) 1). Transcaspian Provinces.
Eucrostis petitaria, Christoph, Stett. Ent. Zeit. Vol. 48, p. 165 (1887); Roman. Mém. Lép. Vol. 5, p. 47, t. 3, f. 3 (1889).
3. **H. alexandraria, nov. sp.** 2), Prout (huj. gen.?). — **Pl. 5, Fig. 7.** Central Asia.

156. Genus TELOTHETA, Warren

Telotheta. Warren, Novit. Zool. Vol. 7, p. 140 (1900).

Characters. — Face smooth. Palpus in ♂ rather short, in ♀ much elongate, second joint moderately rough-scaled, third joint in ♂ small, in ♀ very long. Tongue present. Antenna not more than one-half, in ♂ bipectinate to two-thirds, apex nearly simple; in ♀ serrate, pubescent. Pectus slightly hairy. Femora glabrous. Hindtibia in ♂ not dilated, in both sexes with terminal spurs only. Abdomen not crested. Frenulum in ♂ slender, from before basal expansion, in ♀ wanting. Forewing with costa nearly straight, apex pronounced, termen curved, oblique, cell short. DC slightly incurved, SC^1 stalked with $SC^{2\,5}$ (arising before R^1), R^1 rather long-stalked, M^1 stalked. Hindwing with apex rounded, termen rounded, feebly bent at R^3, tornus squared, cell short, DC very straight, C closely approximated to cell to beyond one-half, then divergent, SC^2 long-stalked, R^2 from slightly above middle of DC, M^1 stalked.

Early stages unknown.

Type of the genus : *Telotheta muscipunctata* (Dognin) = *Geometra muscipunctata*, Dognin = *Telotheta chlorostigma*, Warren (1900).

Geographical distribution of species. — Ecuador to Colombia.

1. *T. muscipunctata* (Dognin). Ecuador to Costa Rica.
Geometra muscipunctata, Dognin, Le Naturaliste, Vol. 14, p. 186 (1892).
Telotheta chlorostigma, Warren, Novit. Zool. Vol. 7, p. 140 (1900) (nov. syn.).

157. Genus CALLISTEUMA, nov. gen., Prout

Callisteuma, nov. gen. Prout.

Characters. — Face smooth. Palpus in both sexes short, very slender, terminal joint small. Tongue small, slender. Antenna short, in both sexes bipectinate, the branches moderately long in ♂, shorter in ♀; apical one-third merely serrate. Pectus slightly hairy. Femora glabrous. Hindtibia in ♂ not dilated, in both sexes with terminal spurs only. Abdomen not crested. Frenulum in ♂ slender, not long, from before marked basal expansion; in ♀ quite rudimentary, evidently non-functional. Forewing with costa scarcely arched, apex rather acute, termen smooth, slightly curved, cell about one-half, DC incurved, SC^1 from cell, anastomosing with C, SC^2 normal, well free from SC^1, R^1 connate or separate, M^1 separate; hindwing with apex and termen rounded, tornus rather pronounced, cell about one-half, DC not very oblique, C anastomosing to beyond one-half of cell, SC^2 stalked, R^2 nor-

1) ♂ unknown; ♀ antenna not pectinate; SC^2, as well as SC^1, running into C.

2) **Hierochthonia** (?) **alexandraria** (Püngeler, MS.), **nov. sp.** — ♀. Similar to *petitaria*, Christoph, but differing as follows : antenna very shortly pectinate; forewing somewhat narrower, with costa straighter; colour more bluish green, more uniform; fringe white; forewing with SC^1 anastomosing at a point with C; hindwing with C merely *approximated* to cell (to considerably beyond one-half), not anastomosing; abdomen perhaps less robust. Alexander Mountains, Central Asia. Type in coll. Pungeler. On account of vein C of the hindwing, can hardly be allowed to remain on this genus. R^1 of forewing is well stalked.

mal, M^1 usually connate (Pl. 4, Fig. 16). ♂ genitalia with uncus bifid, gnathos bluntly pointed, harpe simple, penis pestillate, with thorn at the orifice of the ædeagus and long cornulus; related to *Synchlora*.

Early stages unknown.

No doubt a highly specialized descendent of *Synchlora*, convergent towards *Hierochthonia*, with which it shares nearly all characters, but retains the tongue. The presence of a vestigial ♀ frenulum, in spite of advanced specialization, well illustrates the greater persistence of that organ in the New World, on which we commented in our Introduction.

Type of the genus : *Callisteuma fringillata* (Schaus) = *Aplodes fringillata*, Schaus.

Geographical distribution of species. — S. E. Brazil.

1. *C. fringillata* (Schaus). — Pl. 5, Fig. 2. S. E. Brazil.
Aplodes fringillata, Schaus, Journ. New York Ent. Soc. Vol. 5, p. 161 (1897).
Microloxia fringillata, Warren, Novit. Zool. Vol. 7, p. 135 (1900).

158. Genus DYSCHEILIA, Dognin

Dyscheilia. Dognin, Mém. Soc. Ent. Belg. Vol. 18, p. 160 (1911).

Characters. — Palpus and tongue quite small, aborted. Antenna of ♀ bipectinate, the pectinations well separated (♂ unknown). Hindtibia with terminal spurs only. Abdomen not crested. Frenulum in ♀ wanting. Forewing with SC^1 free, R^1 stalked with SC^{2-5}, R^2 above middle of DC, M^1 connate; hindwing with SC^2 long-stalked, R^2 above middle of DC, M^1 short-stalked.

Early stages unknown.

Only known to us from Dognin's diagnosis, with one or two supplementary characters supplied by the author in litt.

Type of the genus : *Dyscheilia inornata*, Dognin (1911).

Geographical distribution of species. — Argentina.

1. *D. inornata*, Dognin. Argentina.
Dyscheilia inornata, Dognin, Mém. Soc. Ent. Belg. Vol. 18, p. 160 (1911).

159. Genus XANTHOXENA, Warren

Xanthoxena. Warren, Novit. Zool. Vol. 7, p. 130 (1900).

Characters. — Face smooth. Eye small. Palpus in ♀ moderate, slender, second joint with appressed scales, reaching about as far as frons, third joint moderate, distinct (♂ unknown). Tongue developed. Antenna in ♀ bipectinate with long branches. Pectus slightly hairy. Femora glabrous. Hindtibia with terminal spurs only. Abdomen not crested. Frenulum in ♀ wanting, basal expansion of hindwing moderate. Forewing broad, with costa arched, apex rounded, termen convex, oblique posteriorly, cell short, DC slightly oblique, not incurved, SC^1 stalked to beyond R^1, SC^2 stalked to well beyond SC^5, R^1 stalked, R^2 from near apex of cell, M^1 short-stalked; hindwing with apex rounded, termen strongly convex, tornus squared, cell rather short, DC rather oblique, C approximated to cell to nearly one-half, SC^2 stalked, R^2 from near R^1, M^1 stalked.

Early stages unknown.

Like the Old-World *Xanthodura*, this genus has struck out an entirely independent course, at least as regards coloration, but there is no possible doubt as to its belonging to the present subfamily. Unfortunately only the ♀ is known. Beyond the small eye and the stalking of SC^1 it shows nothing in common with *Xanthodura*.

Type of the genus : *Xanthoxena imitans*, Warren (1900).

Geographical distribution of species. — Ecuador.

1. *X. imitans*, Warren. Ecuador.
Xanthoxena imitans, Warren, Novit Zool. Vol. 7, p. 131 (1900).

160. Genus XANTHODURA, Butler

Xanthodura. Butler, Ann. Mag. Nat. Hist. (5), Vol. 5, p. 384 (1880).

Characters. — Face smooth. Eye rather small. Palpus in ♂ shortish, second joint moderately rough-scaled, third joint minute (♀ unknown). Tongue present. Antenna in ♂ bipectinate with moderate branches (tips lost). Pectus hairy. Femora hairy (?). (Hindlegs lost.) Abdomen short, not crested. Frenulum in ♂ rather slender, from before basal expansion, retinaculum near base. Forewing with costa slightly arched, apex moderate, termen entire, oblique, slightly curved, cell less than one-half, SC^1 well stalked with SC^{2-5}, anastomosing with C, SC^2 from just before SC^5, R^1 approximated to SC^{2-5}, R^2 from very near R^1, M^1 approximated to R^3; hindwing with apex rounded, termen weakly sinuate between R^1 and R^3, then prominent, tornus pronounced, inner margin long, cell short, DC^3 very slightly incurved, then rather strongly oblique, C anastomosing at a point with cell, rapidly diverging, SC^2 very short-stalked, R^2 from close to R^1, M^1 connate.

Early stages unknown.

An apparently isolated genus, with marked indications of specialization. The type is unique, and unfortunately not perfect.

Type of the genus : *Xanthodura trucidata*, Butler (1880).

Geographical distribution of species. — Madagascar.

1. *X. trucidata*, Butler. — Pl 5, Fig. 1. Madagascar.
Xanthodura trucidata, Butler, Ann. Mag. Nat. Hist. (5), Vol. 5, p. 385 (1880).

Group VI

161. Genus PARAMAXATES, Warren

Paramaxates. Warren, Novit. Zool. Vol. 1, p. 387 (1894).
Lissolica. Swinhoe, Trans. Ent. Soc. Lond. p. 172 (1894).

Characters. — Face smooth. Palpus moderate, second joint stout, shortly rough-scaled, third joint in ♂ short, subovate, in ♀ somewhat longer, but not extreme. Tongue developed. Antenna simple in both sexes. Pectus hairy. Femora more or less hairy. Hindtibia in ♂ somewhat dilated with hair-pencil, in both sexes with all spurs present. Abdomen not crested, anal tuft strong. Forewing with

costa well arched, termen strongly crenate, excised between R^1 and R^2, a strong tooth at R^3, cell less than one-half, DC incurved or inangled. SC^1 from cell, free, SC^2 normal. M^1 approximated at its origin to R^3; hindwing narrow, shaped nearly as in *Maxates*, the tail slightly less extreme, cell short, DC curved, rather oblique posteriorly, C shortly approximated to cell near base, then rapidly diverging, SC^2 connate or very shortly stalked with R^1, M^1 usually just separate, sometimes connate, very occasionally minutely stalked (**Pl. 4, Fig. 13**). ♂ genitalia with uncus bifid, widely divided at the base, gnathos very narrow, atrophied, harpe serrate along the inner margin, penis rounded, with two small horny cornuli; the eighth sternite terminates in two points; on the eighth tergite there is a plate with two long arms, quite distinct from any other form studied, suggesting more affinity with the *Actenochroma*- or *Hipparchus*-groups than with any of the more specialized forms.

Early stages unknown.

A curious genus, apparently quite distinct genetically from the other species with frenulum wanting; possibly derived from a form akin to *Dooabia*. The loss of the frenulum is here accompanied by less manifest expansion of the base of costa than elsewhere.

Type of the genus : *Paramaxates polygrapharia* (Walker) *Hypochroma polygrapharia*, Walker = *Paramaxates vagata*, Warren (1894).

Geographical distribution of species. Indo-Malayan.

1. *P. polygrapharia* (Walker). N. India to Borneo and Celebes

Hypochroma polygrapharia, Walker, List Lep. Ins. Brit. Mus. Vol. 21. p. 429 (1860).
Macaria vagata, Walker, ibidem, Vol. 23, p. 927 (1861).
Trygodes vagata, Moore, Proc. Zool. Soc. Lond. p. 642 (1867).
Paramaxates vagata, Warren, Novit. Zool. Vol. 1, p. 387 (1894).
Paramaxates vagata celebensis, Warren, ibidem, p. 387 (1894).
Paramaxates vagata khasiana, Warren, ibidem, p. 387 (1894).
Lissolica polygrapharia, Swinhoe, Trans. Ent. Soc. Lond. p. 172 (1894).
Paramaxates polygrapharia, Hampson, Fauna Ind. Moths, Vol. 3, p. 500 (1895).

162. Genus CATHYDATA, nov. gen., Prout

Cathydata, nov. gen. Prout.

Characters. — Face with projecting tuft of scales. Palpus in both sexes with second joint very long, shortly scaled, third joint smooth, in ♂ quite moderate, in ♀ very long. Tongue developed. Antenna in ♂ bipectinate with moderate branches, in ♀ simple. Pectus hairy. Hindtibia in ♂ dilated, with hair-pencil and process, in both sexes with all spurs. Abdomen not crested. Wings thinly scaled, subhyaline. Forewing with costa slightly arched (more so at base), apex moderate, rounded, termen slightly waved, oblique, bending and becoming very oblique, tornus somewhat rounded off, cell less than one-half, DC^2 deeply inangled, DC^3 deeply incurved (thus with a sharp angle at origin of R^2), SC^1 from cell, free, SC^2 normal, R^1 about connate, M^1 connate or short-stalked; hindwing with apex rounded off, termen produced to a strong tooth at R^1 and a still stronger at R^3, thence crenulate to tornus, cell less than one-half, quite short anteriorly, DC^2 curving, becoming extremely oblique, DC^3 arising far distally to origin of DC^2, C approximated to cell for some distance near base, SC^2 very long-stalked, M^1 very short-stalked.

Early stages unknown.

Probably derived from the *Phrudocentra-Neagathia*-group.

Type of the genus : *Cathydata batina* (Druce) = *Racheospila* (?) *batina*, Druce.

Geographical distribution of species. — Tropical America.

1. *C. batina* (Druce). Guatemala to Colombia.
Racheospila (?) *batina*, Druce, Biol. Centr. Amer. Lep. Het. Vol. 2, p. 92, t. 50, f. 9, 10 (1892).

163. Genus CHLORACTIS, Warren

Chloractis, Warren, Novit. Zool. Vol. 2, p. 88 (1895).

Characters. — Face smooth. Palpus in ♂ slender, moderate, smooth-scaled (♀ unknown). Tongue present. Antenna in ♂ bipectinate with short branches. Hindtibia in ♂ scarcely dilated, but with a terminal process fully one-third as long as tarsus, all spurs well developed. Abdomen not crested. Wings thinly scaled, subhyaline. Forewing with costa gently arched, apex acute, termen slightly incurved to R^3, here elbowed, thence very oblique, tornus not sharp, cell less than one-half, DC deeply inbent, SC^1 from cell, anastomosing with C, SC^2 normal, R^2 from above middle, M^1 approximated at origin to R^3; hindwing with termen produced to a tail at R^3, tornus pronounced, inner margin long, cell less than one-half, DC^3 strongly inbent, C rather shortly approximated to cell near base, rapidly diverging, SC^2 rather long-stalked, R^2 from very near R^1, M^1 very short-stalked.

Early stages unknown.

Related to the preceding, but differing in the palpus, the form of discocellulars, shape of wing, etc.

Type of the genus : *Chloractis pulcherrima* (Butler) = *Calothysanis pulcherrima*, Butler (1895).

Geographical distribution of species. — Tropical America.

1. *C. pulcherrima* (Butler). Amazons, Colombia, Trinidad.
Calothysanis pulcherrima, Butler, Trans. Ent. Soc. Lond. p. 342 (1881).
Chlorinthia pulcherrima, Kaye, ibidem, p. 147 (1901).

164. Genus CACOCHLORIS, nov. gen., Prout

Cacochloris, nov. gen. Prout.

Characters. — Face smooth. Palpus moderate or longish, rather stout, second joint rough-scaled, third joint small or (*ochrea*) slightly elongate. Tongue short. Antenna short, in both sexes bipectinate with moderately long branches. Pectus somewhat hairy. Hindtibia in ♂ not dilated, in both sexes with all spurs. Abdomen not crested. Frenulum wanting in both sexes, basal expansion of hindwing well marked. Wings thickly scaled. Forewing with costa straight, apex rather acute (less so in *ochrea*), termen oblique, straight anteriorly, curved posteriorly, cell about one-half; DC inbent, oblique posteriorly, SC^1 from cell, anastomosing strongly with C, SC^2 coincident with (*uvidula*) or stalked with (*ochrea*) SC^1, R^1 short-stalked, M^1 separate; hindwing with apex rounded, termen somewhat rounded, tornus rather prominent, cell short, DC^3 usually rather incurved, C anastomosing with cell at a point (*uvidula*) or rather more (*ochrea*), gradually diverging, SC^2 stalked, R^2 normal, M^1 separate.

Early stages unknown.

The absence, or point of origin, of SC^2, as well as the coloration, suggests some doubts whether this genus truly belong to the *Hemitheinae*. It might almost, like *Aplasta*, be referred to the *Œnochrominae*.

Type of the genus : *Cacochloris uvidula* (Swinhoe) = *Stegania uvidula*, Swinhoe.

Geographical distribution of species. — India, Africa.

1. *C. uvidula* (Swinhoe). — Pl. 4, Fig. 15. W. and Central India to Ceylon.
   Stegania uvidula, Swinhoe, Proc. Zool. Soc. Lond. p. 860 (1885).
   Euchloris uvidula, Hampson, Fauna Ind. Moths, Vol. 3, p. 498 (1893).
2. *C. ochrea* (Warren). German E. Africa, N. Nigeria.
   Euchloris ochrea, Warren, Novit. Zool. Vol. 4, p. 210, t. 5, f. 21 (1897).

165. Genus EUCHLORIS, Hübner

Euchloris. Hübner, Verz. bek. Schmett. p. 283 (1826?) [1].
Thetidia. Boisduval, Gen. et Ind. Meth. Eur. Lep. p. 189 (1840).

Characters. — Face smooth. Palpus in both sexes with second joint rather long, usually strong, strongly rough-scaled above and beneath, third joint moderate to long, partly concealed by projecting scales of second joint. Tongue short and slender. Antenna in ♂ bipectinate to two-thirds, or further, with long branches, apically merely serrate; in ♀ usually subserrate. Pectus hairy. Femora somewhat hairy. Hindtibia in ♂ not dilated, but rough-scaled, sometimes even slightly hairy, sometimes with a small pencil of hairs from the femoro-tibial joint; in both sexes with all spurs. Abdomen not crested. Forewing with costa gently arched, apex moderate, termen oblique, curved posteriorly, cell about one-half, DC more or less curved, becoming rather oblique, SC^1 from cell, free or anastomosing with C, SC^2 normal, sometimes anastomosing with SC^1, R^1 connate or approximated (in *plusiaria* short-stalked), M^1 approximated or rarely connate (in *plusiaria* well separated); hindwing with termen fully or moderately rounded, rarely a little subcrenulate, cell nearly one-half, DC usually little incurved, but becoming somewhat oblique posteriorly, C approximated to cell for some distance (at a point only in *quantula*), then moderately divergent, SC^2 connate or short stalked, M^1 connate or approximated (well separate in *plusiaria*) (Pl. 2, Fig. 17). ♂ genitalia : uncus bifid, with pointed socii, gnathos terminating in a point, harpes parallel plain, vinculum square, deeply emarginate at the base, penis a long fine needle (*smaragdaria*; *plusiaria* agrees except that gnathos seems to be absent, vinculum rounded).

Egg. — A short broad oval, much flattened on either side, surface with fine hexagonal reticulation (Burrows, *Ent. Rec.* Vol. 12, p. 153, t. 7, f. 1).

Larva. — With surface very rough, shagreened, a pronounced lateral flange, special tubercles on abdominal segments 1-4 (above the flange), 5 (on the flange, ventral and posterior) and 8 (dorsal), bearing, in first instar, crescend-topped hairs; in later life the tubercles themselves become tall, cone-shaped, and covered with horny hooks. By means of these special organs, the larva clothes itself with fragments of the foodplant (Burrows, loc. cit. p. 154, 160, t. 7, f. 2-4).

Pupa. — Rugose, shagreened, spiny, spiracles very large and prominent, dorsal area of anal segment prolonged beyond anus, bearing a group of spines which terminate in spirally curved hooks (Burrows, loc. cit. p. 171).

1) The name *Euchloris* was unfortunately used by Billberg (*Enum. Ins. Mus. Billb.* p. 23, 1820) in the Coleoptera, but as it was entirely undescribed, and has been rightly ignored by Coleopterists, we have not thought it necessary to suppress the name here. Should it be judged desirable, however (on the ground that it is not always possible for workers on one Order of Insects to judge or to sift questions of validity in another Order), to adopt a rigid law against duplications, the present genus must be called *Thetidia* (type *plusiaria*, Lucas sel., Chenu's *Encycl.* Vol. 2, p. 153).

We refer here all the frenulum-losing species of the *Comibaena*-group which have all four spurs present in both sexes. The relation to *Comibaena* is quite certain, by characters of palpus, genitalia, larva, etc. It is not quite certain, however, that Section II may not form a distinct genus, the palpus being more slender and the larva and genitalia at present unstudied. Its extremely long antennal pectinations, with only a very short apical extremity simple, and the point-anastomosis of vein C of the hindwing 1) further help to place it a little apart, and its aspect is rather nearer to the *Comostola*-group than to typical *Euchloris*. With it, however, it shares the strong tendency to escape the stalking of SC^2 of hindwing, the general proportions of palpus and build of legs. The species in Section I are quite homogeneous in essentials, though covering almost the full range of the recognized venational variants. It is curious that we have only observed one species (*plusiaria*) in which SC^1 ever anastomoses with SC^2, and that in the specimens where this occurs it is always separate from C, though in some other specimens of the same species it anastomoses with C (as occasionally happens in most of its congeners).

Type of the genus : *Euchloris smaragdaria* (Fabricius) = *Phalaena smaragdaria*, Fabricius (1826?).

Geographical distribution of species. — Palæarctic Region, India.

SECTION I. — Palpus stout; ♂ antennal pectinations moderately long.

1. *E. smaragdaria* (Fabricius). — Palæarctic Region

Phalaena smaragdaria, Fabricius, Mant. Ins. Vol. 2, p. 192 (1787).
Geometra smaragdaria, De Villers, Linn. Ent. Vol 4, p. 499 (1789).
Euchloris smaragdaria, Hübner, Verz. bek. Schmett. p. 283 (1826?).
Hemithea smaragdaria, Duponchel, Hist. Nat. Lép. Vol. 7 (2), p. 251, t. 152, f. 5 (1829).
Hipparchus smaragdarius, Curtis, Brit. Ent. Vol. 7, fol. 300 (1830).
Phorodesma smaragdaria, Boisduval, Gen. et Ind. Meth. Eur. Lep. p. 179 (1840).
Geometra smaragdaria, var. *gigantea*, Millière, Icon. Chen. Vol. 3, p. 423, t. 152, f. 16-18 (1874) (var. et ab.).
Phorodesma smaragdaria, var. *castiliaria*, Staudinger, Iris, Vol. 5, p. 141 (1892) (ead. ac. præc.).
Phorodesma smaragdaria, aberr. *obsoleta*, *alinea*, *unilinea*, *caeruleo-viridis* et *viridis*, Burrows, Ent. Rec. Vol. 12, p. 115 (1900).

2. *E. immaculata* (Thunberg) (huj. gen.?) (præc. ab.?). — Sweden (?).

Geometra immaculata, Thunberg, Diss. Ins. Suec. (1), p. 8 (1784).
Nemoria immaculata, Aurivillius, Nord. Fjär. p 198 (1891).
Euchloris (?) *immaculata*, Staudinger, Cat. (ed. 3), p. 263 (1901).

3. *E. volgaria* (Guenée) (*smaragdaria* var. ?). — S. E. Russia to Central Asia.

Geometra prasinaria, Eversmann, Bull. Soc. Nat. Moscou, 1837, nº 2, p. 53 (1837) (non Hufnagel, 1767, nec Schiffermüller, 1775).
Geometra volgaria, Guenée, Spec. Gén. Lép. Vol. 9, p. 344 (1858).
Phorodesma smaragdaria, var. *prasinaria*, Staudinger, Cat. (ed. 1), p. 63 (1861).
Phorodesma smaragdaria, var. *prasinaria*, var. *mongolica*, Staudinger, Iris, Vol. 9, p. 271 (1897) (var.?).

4. *E. plusiaria* (Boisduval). — Spain, Algeria.

Thetidia plusiaria (Rambur, ined.), Boisduval, Gen. et Ind. Meth. Eur. Lep. p. 180 (1840).
Phorodesma plusiaria, Lederer, Verh. Zool.-bot. Ver. Wien, Vol. 3, p. 172 (1853).
Euchloris plusiaria, Staudinger, Cat. (ed. 3), p. 263 (1901).

5. *E. albocostaria* (Bremer). — E. Siberia, Japan, Corea.

Euchloris albocostaria, Bremer, Mém. Acad. Sc. St.-Pétersb. Vol. 8, p. 76, t. 6, f. 22 (1864).
Phorodesma albicostaria, Staudinger, Cat. (ed. 2), p. 144 (1871).

1) This is sometimes in a measure shared by *plusiaria*, but there the anastomosis is only accidental, followed by gradual divergence.

6. *E. chlorophyllaria* (Hedemann). — E. Siberia, China.
Phorodesma chlorophyllaria, Hedemann, Hor. Soc. Ent. Ross. Vol. 14, p. 510, t. 3, f. 7 (1879).
Nemoria chlorophyllaria, Gumppenberg, Nova Acta Acad. Leop. d. Naturf. Halle, Vol. 64, p. 400 (1895).
Euchloris chlorophyllaria, Staudinger, Cat. ed. 3, p. 263 (1901) nec Leech, Ann. Mag. Nat. Hist. (6), Vol. 20, p. 239).

7. *E. jankowskiaria* (Millière). — S. E. Siberia.
Phorodesma jankowskiaria (Millière), Oberthur, Diag. Lep. Askold, p. 8 (1879); Etud. Lnt. Vol. 5, p. 47, t. 4, f. 7 (1880).
Euchloris jankowskiaria, Staudinger, Cat. ed. 3, p. 263 (1901).

8. *E. serraria* (Staudinger). — Fergana.
Phorodesma smaragdaria, var. ? *serraria*, Staudinger, Iris, Vol. 5, p. 141 (1892).
Euchloris serraria, Staudinger, Cat. ed. 3, p. 263 (1901).

9. *E. smaragdularia* (Staudinger). — Fergana.
Phorodesma smaragdularia, Staudinger, Iris, Vol. 5, p. 142 (1892).
Euchloris smaragdularia, Staudinger, Cat. ed. 3, p. 263 (1901).

10. *E. viridifrons*, Warren. — N. Afghanistan.
Euchloris (?) viridifrons, Warren, Novit. Zool. Vol. 4, p. 389 (1897).

SECTION II. — Palpus rather slender; ♂ antennal pectinations extremely long.

11. *E. quantula* (Swinhoe). — Bombay to Ceylon.
Iodis quantula, Swinhoe, Proc. Zool. Soc. Lond. p. 855, t. 50, f. 6 (1885).
Comibaena flaccosa, Swinhoe, ibidem, p. 855, t. 8 (1885) ab.
Euchloris quantula, Hampson, Fauna Ind. Moths, Vol. 3, p. 490 (1895).

NOTE. — *Euchloris baliata, exarata* and *adjecta*, Felder (*Reise Novara, Lep. Het.* t. 127, f. 7, 8, 19) belong to the genus *Zamarada*; *Euchloris simpliciaria*, Leech (*Ann. Mag. Nat. Hist.* (6) Vol. 20, p. 239) is a very close ally or synonym of *Caberodes viridis*, Warren. These, therefore, with two indicated in Turner's recent revision (p. 650), must be removed from the subfamily. Stoll's *tresmaria* (*Suppl. Pap. Exot. Cramer*, p. 161, t. 36, f. 7) referred by Boisduval to *Thetidia* (= *Euchloris*) is a Larentiid of the genus *Conchylia*.

166. GENUS AGLOSSOCHLORIS, NOV. GEN., PROUT

Aglossochloris, nov. gen. Prout.

Characters. — Face smooth. Palpus rather long, second joint stout, much longer than first, densely scaled above and beneath, third joint in both sexes rather small, exposed, smooth-scaled. Tongue wanting, or (in *radiata*) quite vestigial. Antenna in ♂ bipectinate with rather long branches, a rather short apical portion nearly simple; in ♀ very shortly bipectinate. Pectus hairy. Femora somewhat hairy. Hindtibia in ♂ rough scaled, median spurs aborted (*fulminaria*) or absent. Tarsi spinulose. Abdomen not crested. Forewing with costa straight, except at extreme base and close to apex, apex rather acute, termen smooth, very oblique, somewhat curved posteriorly, tornus rounded, cell nearly one-half, DC somewhat curved, SC^1 free, SC^2 normal (sometimes quite shortly stalked), R^1 short-stalked, connate or closely approximated, M^1 separate; hindwing with costa fairly long, apex rounded, termen smooth, little convex, tornus moderate, cell less than one-half, DC slightly or moderately oblique posteriorly, C approximated to cell for some distance near base, rather gradually diverging, SC^2 separate, connate or stalked, R^2 variable, M^1 approximated, sometimes about connate.

LARVA. — Apparently quite similar, certainly similarly clothed, to that of *Euchloris*.

An Asiatic development of *Euchloris*, of similar facies to *plusiaria*. The tibial armature of *fulminaria* is probably in a state of flux, but it is very remarkable that all the males and none of the females which

we have seen, or of which we can obtain information, have the median spurs (or one at least) persisting — an absolutely unique reversal of the general course of evolution of the armature.

Type of the genus : *Aglossochloris fulminaria* (Lederer) = *Phorodesma fulminaria*, Lederer.

Geographical distribution of species. — Central Asia to N. India, ? Amur.

1. *A. fulminaria* (Lederer). — N. Persia, Turkestan.
   Phorodesma fulminaria, Lederer, Hor. Soc. Ent. Ross. Vol. 8, p. 17, t. 2, f. 4 (1870).
   Euchloris fulminaria, Staudinger, Cat. (ed 3), p. 263 (1901).
2. *A. radiata* (Walker). — N. India.
   Thetidea (?) *radiata*, Walker, List Lep. Ins. Brit. Mus. Vol. 26, p. 1567 (1862).
   Euchloris radiata, Hampson, Fauna Ind. Moths, Vol. 3, p. 498 (1895).
3. *A. correspondens* (Alphéraky) (bon. sp. certo). — W. Thian-Shan to Zeraf-shan.
   Phorodesma fulminaria, var. *correspondens*, Alphéraky, Hor. Soc. Ent. Ross. Vol. 17, p. 157, t. 6, p. 85 (1883).
   Euchloris correspondens, Staudinger, Cat. (ed. 3), p. 263 (1901).
4. *A. crucigerata* (Christoph). — N. Persia, Turkestan.
   Phorodesma crucigerata, Christoph, Rom. Mém. Lép. Vol. 3, p. 63, t. 4, f. 11 (1887).
   Euchloris crucigerata, Staudinger, Cat. (ed. 3), p. 263 (1901).
5. *A. mabillei* (Thierry-Mieg). — Central Asia 1).
   Phorodesma mabillei, Thierry-Mieg, Le Naturaliste, Vol. 15, p. 162 (1893).

167. Genus IULOPS, nov. gen., Prout

Iulops, nov. gen. Prout.

Characters. — Face and base of antenna with projecting scales. Palpus rather long, second joint long, with long-projecting scales beneath and shortly rough-scaled above, third joint in both sexes somewhat elongate, slender. Tongue present. Antenna moderate, in ♂ with very long pectinations to near apex, very suddenly shortening (much as in *Euchloris quantula*), in ♀ very shortly ciliated. Pectus and femora hairy. Hindtibia in ♂ not dilated, somewhat rough-scaled, without median spurs, the terminals strong, the inner the longer (in ♀ doubtless with terminal spurs only) 2). Abdomen not crested. Forewing with costa arched, apex moderate, termen rather straight, oblique, cell one-half, DC^3 very oblique posteriorly, SC^1 from cell, anastomosing with C, usually well removed from SC^2, SC^2 normal, R^1 separate (DC^1 often quite long), R^2 usually from very near R^1, M^1 remote at origin from R^3; hindwing with apex and termen moderately rounded, tornus moderately pronounced, cell almost one-half, DC^3 very oblique posteriorly, C rather shortly approximated to cell near base, rather rapidly diverging, SC^2 connate, R^2 variable, sometimes rather extreme, oftener little above middle, M^1 remote at its origin from R^3.

Larva. — Undescribed; clothes itself with florets of aster (Lucas, *Victor. Nat.* Vol. 5, p. 26).

Certainly another offshoot of *Euchloris*.

Type of the genus : *Iulops argocrana* (Meyrick) = *Eucrostis argocrana*, Meyrick.

Geographical distribution of species. — Victoria, Tasmania.

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1) Staudinger's suspicion that the published locality Amur was due to an error is justified. Thierry-Mieg's type (teste Dognin in litt.) and the co-type kindly lent us by M. Dognin are both labelled Central Asia. It is a curious coincidence that a couple of another Central Asiatic species (*correspondens*) in coll. Brit. Mus. are also labelled Amur; we have assumed this also to be an error.

2) The only ♀ which we have seen has lost both hindlegs.

1. *I. argocrana* (Meyrick). Victoria, Tasmania, Queensland.
Eucrostis argocrana, Meyrick, Proc. Linn. Soc. N. S. Wales (2), Vol. 2, p. 867 (1888).
Cymatoplex argocrana, Turner, ibidem, Vol. 35, p. 578 (1910).

168. Genus HOLOTERPNA, Püngeler

Holoterpna, Püngeler, Iris, Vol. 12, p. 296 (1900).

Characters. — Face densely but smoothly scaled (vertex perhaps rougher-scaled than most of the group). Palpus moderate to rather short, in type rather stout, second joint rough-scaled, third joint stout, in ♀ rather elongate. Tongue rudimentary or wanting. Antenna over one-half (in *pruinosata* only one-half), in ♂ bipectinate with short branches, in ♀ simple, rather thick. Thorax strongly clothed above, densly hairy beneath. Femora hairy. Hindtibia in ♂ not dilated, in both sexes moderately stout, with terminal spurs only. Tarsi moderately spinulose. Abdomen robust, not crested. Wings rather robust, thickly scaled. Forewing triangular, costa straight, only close to apex a little arched, apex roundly prominent, termen entire, oblique, longer than inner margin, very little convex, tornus rounded, cell about one-half, DC rather deeply inbent, SC^1 free, SC^2 normal, R^1 about connate, M^1 connate or just separate; hindwing with costa (especially in type species) rather long, apex rounded, termen little convex, tornus pronounced, inner margin moderately long (in *pruinosata* very long, tornal area produced), cell somewhat less than one-half, SC^2 very shortly stalked, R^1 very characteristic, M^1 connate or just separate, exceptionally very shortly stalked.

Early stages unknown.

In spite of the different facies, seems to differ from *Aglossochloris* only in minor characters. It is questionable whether *pruinosata* strictly belongs to the genus.

Type of the genus : *Holoterpna diagrapharia*, Püngeler (1900).

Geographical distribution of species. — Turkestan, Palestine.

Section I. — Palpus, antenna, abdomen and length of hindwing moderate.

1. *H. diagrapharia*, Püngeler. Turkestan.
Holoterpna diagrapharia, Püngeler, Iris, Vol. 12, p. 296, t. 9, f. 14 (1900).

Section II. — Palpus, antenna and abdomen rather short, hindwing much elongate to tornus.

2. *H. pruinosata* (Staudinger). Pl. 5, Fig. 12. Palestine.
Eucrostes (?) pruinosata, Staudinger, Iris, Vol. 10, p. 303 (1898).
Holoterpna pruinosata, Püngeler, ibidem, Vol. 12, p. 297 (1900).

169. Genus DYSCHLOROPSIS, Warren

Dyschloropsis, Warren, Novit. Zool. Vol. 2, p. 89 (1895).

Hipparchus, Gumppenberg, Nova Acta Acad. Leop. d. Naturf. Halle, Vol. 64, p. 462 (1895) (nec Leach).

Characters. — Face smooth. Palpus in both sexes short (scarcely as long as diameter of eye), second joint rather shortly rough-scaled, third joint small, not exposed. Tongue rudimentary. Antenna

rather short, in ♂ bipectinate to apex, with moderate branches; in ♀ strongly serrate (almost subpectinate). Pectus hairy. Hindtibia in ♂ not dilated, in both sexes with terminal spurs only. Abdomen not crested. Forewing triangular, costa scarcely arched, apex acute, termen oblique, entire, very slightly prominent in middle, cell nearly one-half, DC somewhat incurved, SC^1 from cell, anastomosing with C, SC^2 normal, sometimes anastomosing shortly with SC^1, R^1 short-stalked, M^1 separate; hindwing with costa long, termen rather straight, slightly incurved between R^1 and R^3, at which points it is very slightly bulged, tornus moderate, cell somewhat less than one-half, DC^3 somewhat incurved, C anastomosing with cell at a point or very shortly near base, gradually diverging, SC^2 stalked, M^1 connate or separate.

Early stages unknown.

This genus and *Holoterpna* are possibly offshoots of *Microloxia*, through loss of frenulum, shortening of palpus, change of wing-shape, etc. In colour and texture *Holoterpna* scarcely differs from *Dyschloropsis*, and most structural characters agree, though the latter is less robust, with very differently shaped hindwing (costa longer, inner margin shorter, a weak sinuosity between R^1 and R^3); it would be possible to merge them.

Type of the genus : *Dyschloropsis impararia* (Guenée) = *Iodis impararia*, Guenée.

Geographical distribution of species. — S. Russia to W. Mongolia.

1. *D. impararia* (Guenée). S. Russia to W. Mongolia.

Iodis impararia, Guenée, Spec. Gén. Lép. Vol. 9, p. 354 (1858).
Eucrostis imparata, Herrich-Schaffer, Neu. Schmett. Eur. Vol. 3, p. 27, f. 136 (1861).
[*Thalera*] *impararia*, Lederer, Wien. Ent. Monats. Vol. 5, p. 358 (1861).
Dyschloropsis impararia, Warren, Novit. Zool. Vol. 2, p. 89 (1895).
Hipparchus impararia, Gumppenberg, Nova Acta Acad. Leop. d. Naturf. Halle, Vol. 64, p. 463 (1895).
Geometra impararia, Staudinger, Cat. (ed. 3), p. 261 (1901).

170. Genus THALERA, Hübner

Thalera. Hübner, Verz. bek. Schmett, p. 285 (1826?); Lederer, Verh. Zool.-bot. Ver. Wien, Vol. 3, p. 172 (1853).

Characters. — Face smooth. Palpus quite short, second joint rather strongly rough-scaled, third joint in both sexes very small. Tongue present. Antenna in ♂ bipectinate to apex, the branches moderate or long at first, at apex very short; in ♀ very shortly bipectinate. Pectus hairy. Femora almost glabrous. Hindtibia in ♂ not dilated, in both sexes with terminal spurs only. Abdomen not crested. Forewing with costa shouldered at base, thence straight to near apex, apex squared, termen oblique, very faintly sinuous, in *lacerataria* excised below apex, otherwise merely slightly prominent in middle, cell less than one-half, DC^3 deeply inbent, SC^1 from cell, anastomosing with C (very exceptionally free), SC^2 normal, very usually anastomosing with SC^1, R^1 short-stalked, R^2 from much above middle of DC, M^1 approximated to R^3; hindwing with apex rounded off, termen excised between R^1 and R^3, toothed at these veins and very minutely at the others, tornus moderate, cell less than one-half, DC^3 deeply inbent, C anastomosing shortly with cell, approximately for its second fifth (in *lacerataria* at a point only), then rather rapidly diverging, SC^2 stalked, sometimes quite shortly 1), R^2 characteristic, M^1 approximated to R^3. ♂ genitalia with uncus tapering to fine point, socii bulbed at base, of equal length with

2) Lederer says connate; we have observed no such case.

uncus, gnathos atrophied, harpe fused at base, scobinated above, saccus extended beyond the harpe, penis pestillate, widening above (compare *Microloxia*).

Larva. — Slender, twig-like, head produced into two sharp points, deeply cleft between, prothorax similarly produced into two points, projecting over head, body without prominences, anal flap produced, terminating in two points. Colour green, with rose-red (sometimes interrupted) dorsal line. On *Calluna*, etc. (de Roo van Westmaas), Sepp's *Nederl. Ins.* (2). Vol. 3, p. 23, t. 5).

Pupa. Structure not described, some good figures given in Sepp, loc. cit. (f. 9-12).

On the apparent origin of this genus see *Culbinia*. There must also be a close collateral relationship with *Dyschloropsis*. There is a slight superficial resemblance to the type species of *Hemithea*, which has been greatly exaggerated by early writers.

Type of the genus : *Thalera fimbrialis* (Scopoli) = *Phalaena fimbrialis*, Scopoli (1853).

Geographical distribution of species. — Palæarctic Region, N. India.

1. *T. fimbrialis* (Scopoli).

a. *Thalera fimbrialis fimbrialis*. — Europe to Central Asia.

Phalaena fimbrialis, Scopoli, Ent. Carn. p. 216 (1763).
Phalaena Geometra thymiaria, Linne, Syst. Nat. ed. 12, Vol. 1 (2), p. 859 (1767).
? *Phalaena fimbriata*, Hufnagel, Berl. Mag. Vol. 4, p. 604 (1767).
Phalaena Geometra bupleuraria [Schiffermüller], Schmett. Wien, p. 97 (1775).
Phalaena Geometra ditaria, De Villers, Linn. Ent. Vol. 2, p. 302 (1789) (nec Fabricius).
Geometra bupleuraria, Hübner, Samml. Eur. Schmett. Geom. t. 2, f. (1796?), p. 16 (1800?).
Phalaena Geometra albaria, Esper, Schmett. in Abbild. Vol. 3, p. 267, t. 47, f. 3, 4 (1805?) ab. ?).
Thalera bupleuraria, Hübner, Verz. bek. Schmett. p. 285 (1826).
Hemithea bupleuraria, Duponchel, Hist. Nat. Lép. Vol. 7 (2), p. 230, t. 151, f. 5 (1829).
Thalera thymiaria, Lederer, Verh. Zool.-bot. Ver. Wien, Vol. 3, p. 172 (1853).
Nemoria thymiaria, de Roo van Westmaas, Sepp's Nederl. Ins. (2), Vol. 3, p. 23 (1871?).
Thalera fimbrialis, Staudinger, Cat. ed. 2, p. 145 (1871).
Thalera fimbrialis, var. *moseritta*, Gumppenberg, Nova Acta Acad. Leop. d. Naturf. Halle, Vol. 64, p. 508 (1895) (ab.).
Thalera fimbrialis, ab. var. ? *magnata*, Fuchs, Jahrb. Nassau. Ver. Nat. Vol. 56, p. 53 (1903) (var.?).

b. *Thalera fimbrialis chlorosaria*. — E. Siberia, Corea.

Thalera fimbrialis, Graeser, Berl. Ent. Zeitschr. Vol. 32, p. 387 (1888).
Thalera chlorosaria, Graeser, ibi lem, Vol. 35, p. 81 (1890).
Thalera fimbrialis, var. ? *chlorosaria*, Staudinger, Iris, Vol. 10, p. 11 (1897).

2. *T. lacerataria*, Graeser. — S. E. Siberia and Japan to China.

Thalera lacerataria, Graeser, Berl. Ent. Zeitschr. Vol. 32, p. 387 (1888).
Chlorodontopera robustaria, Leech, Ann. Mag. Nat. Hist. (6), Vol. 20, p. 230 (1897) (nec Guenée).
Chlorodontopera suavis, Swinhoe, Trans. Ent. Soc. Lond. p. 670 (1902) (nov. syn.).

3. *T. aeruginata* (Warren) (præc. var. vel syn. ?). — N. India.

Chlorodontopera aeruginata, Warren, Proc. Zool. Soc. Lond. p. 352 (1893).

Note. — *Thalera distracta*, Walker (Vol. 22, p. 593) is a *Neostervha*, *T. atroviridaria*, Mabille (*C. R. Soc. Ent. Belg.* Vol. 23, p. 22) a *Traminda*, both *Acidaliinae*.

171. Genus DOLOSIS, nov. gen., Prout

Dolosis, nov. gen. Prout.

Characters. — Face smooth. Palpus in both sexes minute. Tongue vestigial. Antenna rather short, in both sexes with moderate pectinations to near apex, apex ciliated. Pectus hairy. Hindtibia

in ♂ rather short, slender, with four approximated spurs (medians at four-fifths). Abdomen not crested. Forewing with costa arched, apex moderate; termen crenulate, bent in middle, becoming very oblique, cell one-half, DC^3 rather deeply incurved, SC^1 from cell, or almost connate with $DC^{2\text{-}5}$, anastomosing at a point with C, SC^2 normal, R^1 well separate (in the type abnormally remote), R^2 from very near R^1, M^1 widely separate; hindwing with termen excised between R^1 and R^3, tornus moderate C closely approximated to cell to about one-half, SC^2 stalked, R^2 from very near R^1, M^1 widely separate.

Early stages unknown.

The single known species has superficially quite the aspect of a *Thalera*, especially of *laceratariа*, though without the excision in termen of forewing. Structurally, however, it differs in the presence of median spurs, the non-anastomosis of C of hindwing, the longer pectinations of the ♀ antenna, etc. The description given by Guenée of his *araria* (type of *Heterocrita*, Warren) agrees in most respects with the present species, but that has a different abdominal pattern. In the absence of structural clues, we prefer to regard *araria* as a near relative of *koranata*.

Type of the genus : *Dolosis illacerata*, Prout.

Geographical distribution of species. — S. Africa.

1. **D. illacerata, nov. sp.** 1), Prout. Natal.

172. Genus NOTHOTERPNA, Warren

Nothoterpna. Warren, Novit. Zool. Vol. 16, p. 111 (1909).

Characters. — Face thickly but smoothly scaled. Palpus in ♂ minute, tapering, rather rough-scaled beneath (♀ unknown). Tongue present. Antenna in ♂ short, bipectinate to apex with moderate, rather stout branches. Pectus hairy. Hindtibia not dilated, all spurs present. Abdomen not crested. Forewing with margins little convex and apex pronounced (type), or with apex and termen more rounded (*fallida*), cell about one-half, DC incurved, rather strongly oblique posteriorly, SC^1 from cell, anastomosing with C, SC^2 normal, anastomosing with SC^1, R^1 well separate, R^2 from very near R^1 (especially in type), M^1 well separate; hindwing with apex slightly produced (roundly), termen being little convex, cell rather less than one-half, DC^3 incurved, oblique posteriorly, C approximated to cell to fully one-half, rather gradually diverging, SC^2 stalked, R^2 from very near R^1, M^1 well separate.

Early stages unknown.

Differs from *Dolosis* chiefly in shape. From *Acollesis* in the separation of SC^1 of forewing and (quite considerably) of R^1. From *Hemistola* in several minor points, many of them known to be in some cases variable characters, but cumulatively of considerable force; palpus more minute, antenna rather short, bipectinate to apex, R^2 more extreme (especially in hindwing), M^1 further from R^3, termen of forewing less oblique anteriorly, hindwing not elbowed or tailed at R^3, C approximated to full one-half of cell, gradually diverging, scaling rougher, coloration less bright.

1) **Dolosis illacerata, nov. sp.** — ♀, 32 mm. Face deep fuscous crimson. Palpus fuscous. Vertex and antennal shaft whitish. Occiput green. Thorax and base of abdomen dorsally green; thorax beneath and rest of abdomen whitish green, the latter speckled with black above, and with two dorsal black spots (on second and third segments). Wings bright blue-green, costal and distal edges of forewing and distal edge of hindwing reddish brown; markings reddish brown, overlaid with black, a large cell-spot on each wing, as large as in the heaviest-marked *Thalera laceratariа*; antemedian line of forewing represented by dots on the veins and a larger one on inner margin; postmedian in same position as in *laceratariа*, but not outbent in middle, and consisting only of a series of vein-dots and large spot on inner margin, each accompanied distally by a small white dot. Underside rather paler, the markings (except antemedian) reproduced; no white dots. Durban, Natal, August, 1902 (G. F. Leigh). Type in coll. Brit. Mus. A ♂, also from Natal, is in coll. E. Meyrick, and we are indebted to Mr. Meyrick for furnishing characters which have enabled us to complete the generic diagnosis. The type ♀ has lost the hindlegs, but will certainly have four spurs.

Type of the genus : *Nothoterpna crassisquama*, Warren (1909).

Geographical distribution of species. — W. African.

1 *N. crassisquama*, Warren. Angola.
Nothoterpna crassisquama, Warren, Novit. Zool. Vol. 16, p. 111 (1909).

2. *N. pallida* (Warren). Angola.
Agraptochlora pallida, Warren, Novit Zool. Vol. 11, p. 463 (1904).

173. Genus CHLOROSTERRHA, nov. gen., Prout

Chlorosterrha (Warren, MS.). **nov. gen.** Prout.

Characters. — Face smooth. Palpus minute, second joint not rough-scaled. Tongue slender. Antenna in ♂ bipectinate with moderate branches (in *monochroma* and probably in the type becoming rudimentary at apex). Hindtibia in ♂ slender, with four well-developed spurs. Abdomen not crested. Forewing with costa straight, except at extreme base and towards apex, apex somewhat rounded, termen smooth, very oblique, wing therefore narrow, scaling typically smooth, cell one-half, DC^3 rather strongly incurved, SC^1 from cell, anastomosing with C and (in type) with SC^2, SC^2 normal, R^1 well separate, R^2 somewhat above middle, M^1 well separate; hindwing narrow, costa long, apex rounded, termen smooth, little convex, cell one-half, DC^3 inbent anteriorly, slightly oblique posteriorly, C approximated to cell for some distance, gradually diverging, SC^2 short-stalked, R^2 from slightly above middle of DC, M^1 separate.

Early stages unknown.

The ♀ is unknown, unless *semialba* really belongs to this genus, which is extremely doubtful. It is larger, less narrow (though hindwing much narrower than in *Nothoterpna*), somewhat rougher-scaled, venation somewhat variable, SC^2 of forewing stalked to as far as, or beyond SC^5, R^1 sometimes stalked, R^2 of hindwing from near R^1, ♀ antenna very shortly bipectinate. It is certainly not an *Acollesis*, by our characterization. Typical *Chlorosterrha* is entirely distinct from *Nothoterpna* in shape and facies, though with many characters in common.

Type of the genus : *Chlorosterrha dichroma* (Felder) *Sterrha* (?) *dichroma*, Felder *albaniensis*, Prout 1).

Geographical distribution of species. — S. Africa, ? W. Africa.

1. *C. dichroma* (Felder). Cape.
Sterrha (?) *dichroma*, Felder, Reise Novara, Lep. Het. t. 127, f. 20 (1875).
Omphacodes dichroma (part.), Swinhoe, Trans. Ent. Soc. Lond. p. 552 (1904).

2. **C. monochroma, nov. sp.** 2), Prout. Orange River Colony.

3. *C. semialba* (Swinhoe) (huj. gen.?). — **Pl. 5, Fig. 3.** W. Africa, ? Mashonaland (var.?).
Acollesis semialba, Swinhoe, Ann. Mag. Nat. Hist. (7), Vol. 17, p. 555 (1906).

1) We have drawn up the diagnosis from a specimen from Grahamstown (presented by the Albany Museum) in coll. Brit. Mus. As we have not been able to compare it, side by side, with Felder's type, we state — for the avoidance of possible synonymic complications — that this specimen is the actual type-specimen of the genus, and that in the (improbable) event of its not proving conspecific with *dichroma* it shall be known as follows: **Chlorosterrha albaniensis**, *nov. sp.* — Shape and marking as in *dichroma*, Felder, costa of forewing narrowly ochreous, oblique line slightly tinged with ochreous, no cell-mark; structure as given under our generic characters.

2) **Chlorosterrha monochroma, nov sp.** — ♂, 26 mm. Face and palpus reddish. Head green, narrowly pale ochreous between the antennæ. Antennal shaft pale ochreous, pectinations rather long. Thorax and base of abdomen green above, otherwise whitish. Legs ochreous, foreleg reddish above. Wings shaped nearly as in the type species, apex of forewing slightly more rounded off; forewing bright bluish green, somewhat as in *Hemistola chrysoprasaria*, but a little fuller, costal edge narrowly pale ochreous, unspotted; no markings; fringe green proximally, narrowly white distally. Hindwing slightly paler, especially costally, but nowhere white; fringe as in forewing. Underside the same, or very little paler. Bloemfontein, S. Africa (H. F. Wilsoo). Type in coll. Brit. Mus. Distinguishable superficially from the numerous (and often confusing) unicolorous green S. African *Hemitheinae* by its narrow wings; in *Rhadinomphax*, which is nearly as extreme in shape, the hindwing is white. Structurally the species agrees sufficiently with *Chlorosterrha* though the palpus is somewhat stronger, and in the forewing R^4 is shortly stalked instead of well separate, and M^1 rather more approximated to R^3 than in the type.

174. Genus ACOLLESIS, Warren

Acollesis. Warren, Novit. Zool. Vol. 5, p. 11 (1898).

Characters. — Face smooth. Palpus short, second joint shortly rough-scaled, third joint in both sexes quite small. Tongue slender. Antenna in both sexes bipectinate to apex, with rather long branches. Pectus somewhat hairy. Femora glabrous. Hindtibia in ♂ slender, without hair-pencil, in both sexes with four well-developed spurs. Abdomen not crested. Forewing rather broad, with costa little arched, apex rather sharp, termen straight anteriorly, curved posteriorly, cell less than one-half, DC incurved, strongly oblique posteriorly, $SC^{1,5}$ stalked with R^1, R^1 separating first, SC^1 anastomosing with C, SC^2 normal, not anastomosing with SC^1, R^2 from near R^1, M^1 separate; hindwing with costa moderately long, apex rounded, termen rounded, tornus squared, cell rather short, DC incurved, very strongly oblique posteriorly, C approximated to cell to beyond one-half, SC^2 stalked, R^2 from near R^1, M^1 separate (**Pl. 4, Fig. 18**).

Early stages unknown.

Type of the genus : *Acollesis fraudulenta*, Warren (1898).

Geographical distribution of species. — Cape to Unyoro.

1. *A. fraudulenta*, Warren. — Cape to Transvaal.
   Acollesis fraudulenta, Warren, Novit. Zool. Vol. 5, p. 11 (1898).
2. *A. umbrata*, Warren. — Unyoro.
   Acollesis umbrata, Warren, Novit. Zool. Vol. 6, p. 290 (1899).
3. **A. terminata, nov. sp.** 1), Prout. — Zululand.

175. Genus COLLESIS, Warren

Collesis. Warren, Novit. Zool. Vol. 4, p. 37 (1897).

Characters. — Face smooth. Palpus in both sexes very small, slender, third joint minute. Tongue short and slender. Antenna bipectinate in both sexes. Pectus somewhat hairy. Hindibia in ♂ not dilated, in both sexes with all spurs developed. Abdomen not crested. Forewing with costa arched, apex acute, termen straight anteriorly, curved posteriorly, not very oblique, cell less than one-half, DC incurved, very strongly oblique posteriorly, SC^1 from cell or stalked, anastomosing with C, SC^2 stalked to beyond SC^5, R^1 typically short-stalked with subcostals, R^2 from much above middle of cell, M^1 separate; hindwing with apex rounded, termen more or less rounded, tornus pronounced, cell rather short, DD^1 incurved, becoming very strongly oblique posteriorly, C anastomosing with cell to fully one-half, SC^2 stalked, R^2 from close to R^3, M^1 connate, approximated or very short-stalked.

Early stages unknown.

The two species included here differ considerably in shape and facies, but can provisionally be kept together, to avoid multiplying genera, their characteristics being the short palpus, fully-spurred tibia and *strong anastomosis of* C *of the hindwing*.

1) **Acollesis terminata, nov. sp.** — ♀, 30 mm. Face red, tinged with orange. Palpus on outer side the same, otherwise witish. Vertex and antennal shaft white; occiput pale green. Thorax, abdomen and legs whitish, thorax more green above; forecoxa above and forefemur and tibia on the inner side bright orange. Forewing very broad, as in *umbrata*, Warren, which it closely resembles. Pale yellowish green, with an olivaceous tinge; lines white, rather broad, not very sharply defined, antemedian of forewing from inner margin at one-third, indistinct, not reaching costa, postmedian of both wings placed as in *umbrata*, slightly dark-shaded proximally; fringes dark olive proximally, white distally; no cell-spots. Under surface still paler, fringes as above. Sibudeni, Zululand, 13th Jan., 1904 (C. H. B. Grant). Type in coll. Brit. Mus. Extremely like the ♂ of *Collesis mimica*, except in structure. Distinguished from *Acollesis umbrata* chiefly the absence of discal spots. In the venation, SC^1 of forewing anastomoses very strongly with C. Antennal pectinations about twice width of shaft.

Type of the genus : *Collesis mimica*, Warren (1907).

Geographical distribution of species. — Æthiopian.

SECTION I. — Forewing with SC^1 and R^1 stalked, antennal pectinations long (*Collesis*, Warren).

1. *C. mimica*, Warren. — Pl. 5, Fig. 10. Rhodesia to Shire River.
Collesis mimica, Warren, Novit. Zool. Vol. 2, p. 27 (1895).

SECTION II. — Forewing with SC^1 and R^1 not stalked, antennal pectinations short (gen. div.?).

2. *C. fleximargo* (Warren). Angola.
Syndromodes fleximargo, Warren, Novit. Zool. Vol. 17, p. 112 (1910).

176. GENUS OMPHACODES, WARREN

Omphacodes, Warren, Novit. Zool. Vol. 1, p. 396 (1894) (sec. c.t. typ.).

Characters. — Face smooth. Palpus slender, third joint in both sexes smooth, exposed, moderate, in ♀ often long. Tongue short and slender (in *elegans* apparently wanting). Antenna not long, in ♂ bipectinate to about two-thirds with long or rather long branches, in ♀ lamellate with long teeth (type species) or subdentate (in a few species bipectinate), minutely ciliated. Hindtibia in ♂ dilated, with hair-pencil, in both sexes with all spurs well developed, the medians usually the longer. Abdomen not crested. Forewing with costa slightly arched or nearly straight, apex moderately sharp, termen smooth, oblique, gently curved or nearly straight, cell about one-half, DC incurved, becoming oblique, SC^5 from cell, or connate, sometimes even stalked, nearly always anastomosing with or running into C, SC^2 normal, R^1 stalked or connate, M^1 separate (well separate in type); hindwing with termen usually rounded, torvus moderately pronounced, basal expansion of costa strong, cell not quite one-half, DC^3 oblique posteriorly, C anastomosing strongly, usually to near end of cell, then rapidly diverging, SC^2 stalked, M^1 rather well separated (*directa*), or approximated, connate or stalked (the African species) (Pl. 1, Fig. 7).

Early stages unknown.

Distinguished from *Collesis* by the longer palpus and the subcostal venation. The species are usually of smaller size, the wings less broad, etc. Some of them are superficially of precisely the colour and facies of the types of *Prasinocyma* and *Synaxomera*, in Group V. On the application of the name *Omphacodes*, see under *Rhadinomphax*.

Type of the genus : *Omphacodes directa* (Walker) = *Nemoria directa*, Walker (1894).

Geographical distribution of species. — India, E. and S. Africa.

1. *O. directa* (Walker). N. India.
Nemoria directa Walker, List Lep. Ins. Brit. Mus. Vol. 22, p. 535 (1891).
Nemoria gracilis Butler, Ill. Het. Coll. Brit. Mus. Vol. 7, p. 21, pl. 136, f. 4 (1894) nov. syn. [1].
Euchloris gracilis, Hampson, Fauna Ind. Moths, Vol. 3, p. 492 (1895).

[1] Walker's type is in wretched condition, and has been wrongly determined by Hampson and Swinhoe, see *Macroloxia indecretalis*; but the structural characters make the identification as here given an absolute certainty.

2. *O. coerulea* (Warren). — Lake Nyassa.
Merochlora coerulea Warren, Novit. Zool. Vol. 3, p. 3[illegible] 1[illegible].
Syndromodes coerulea, Warren, ibidem, Vol. 9, p. 27 (1902).

3. *O. punctilineata* (Warren). — S. Africa.
Syndromodes punctilineata, Warren, Novit. Zool. Vol. 4, p. 45 (1897).

4. *O. vivida* (Warren). — Natal to Cape.
Syndromodes vivida, Warren, Novit. Zool. Vol. 6, p. 27 (1899).

5. *O. divergens* (Warren). — Unyoro
Merochlora divergens Warren, Novit. Zool. Vol. 6, p. 293 (1[illegible]).

6. *O. pulchrifimbria* (Warren). — British E. Africa.
Syndromodes pulchrifimbria, Warren, Novit. Zool. Vol. 9, p. 490 (1902).

7. *O. delicata* (Warren). — Natal.
Syndromodes delicata, Warren, Novit. Zool. Vol. 12, p. 84 (1905).

8. *O. trilineata* (Hampson). — Rhodesia, Mashonaland
Acidalesis trilineata, Hampson, Proc. Zool. Soc. Lond. p. 470, t. 80, p. 32 (1910).

9. **O. curvilinea, nov. sp.** ♂, Prout. — Transvaal.

10. **O. elegans, nov. sp.** ♂, Prout. — British E. Africa.
Omphacodes discrepans part., Swinhoe, Trans. Ent. Soc. Lond. p. 552 (1904) nec Felder.

177. Genus MEROCHLORA, nov. gen., Prout

Merochlora, nov. gen. Prout.

Annemoria (part.), Hulst, Trans. Ent. Soc. Vol. 23, p. 312 (1896) (vix Packard).

Characters. — Face smooth. Palpus strong, second joint rather long, strongly rough-scaled beneath and somewhat above, third joint in ♂ small, concealed. Tongue present. Antenna in ♂ bipectinate to near apex with long branches, last few segments merely subserrate, ciliated. Pectus moderately hairy. Hindtibia in ♂ slender, with four closely approximated spurs. Abdomen not crested. Forewing rather broad, costa slightly arched at base, arched distally, straight between, apex moderate, termen rather straight, becoming somewhat curved towards tornus, moderately oblique, cell nearly one-half, DC rather strongly inbent, SC^5 from cell, anastomosing at a point with, or running into, C (4), SC^2 normal, anastomosing at a point with SC^1 (or with C + SC^1), R^1 connate or short-stalked, M^1 separate; hindwing with costa moderately long, apex rounded, termen, except towards apex, little curved, tornus rather pronounced, cell almost one-half, DC^3 inbent anteriorly, C anastomosing with cell to considerably beyond one-half, SC^2 rather long-stalked, M^1 separate.

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1) *Lasiochora punctilineata* on type label.

2) **Omphacodes curvilinea, nov. sp.** — ♂, 20 mm. Face orange, paler below. Palpus orange-yellow, apparently broken. Antennal shaft whitish, with moderate, rather strong, yellow pectinations. Vertex white, tinged with yellow, occiput green. Thorax green above, white beneath; abdomen whitish, legs lost. Forewing with costa straight, except at base, apex acute, termen curved, strongly oblique. Bright green; costal edge yellow; a fine white line from costa close to apex, rather oblique to middle, there curved and becoming more strongly oblique, reaching inner margin before two-thirds. Hindwing rather narrow, costa strong, long, apex rather prominent, but rounded, termen scarcely oblique, tornus less pronounced than in congeners; white, tinged with greenish at termen, and especially at tornus and tornal half of inner margin. Underside of forewing pale green, of hindwing white. Warmbath, Transvaal, 28th Nov., 1906 (C. J. Swierstra). Type in coll. Brit. Mus. A narrow-winged insect than most of the genus, shaped more nearly as *Rhadinomphax* or *Lasiesterycha*, but differing in structure. In the absence of perfect material, and of the ♂ parts, however, impossible to state certainly that it is correctly placed here. SC^5 of forewing is from cell, running into C. R^1 separate; DC^3 of hindwing is little oblique. R^2 little above middle of DC. The marking of the forewing reminds of *divergens*, but that has the hindwing red-coloured.

3) **Omphacodes elegans, nov. sp.** — ♂, 20 mm. Face and palpus red, slightly paler below. Fore legs orange-red, other legs lost. Vertex and antennal shaft whitish, pectinations moderate, reddish yellow. Thorax green above. Abdomen white, dorsally pale green on first few segments. Forewing bright clear green, slightly tinged with bluish; costa narrowly whitish yellow, the extreme edge rather darker; an minute white costal spot; an oblique white line from below apex to inner margin at nearly two-fifths, narrowly bordered by a bright orange line distally; fringe concolorous. Hindwing white, shaded with green in normal region and along inner margin; proximal half of fringe green from tornus, gradually shading off to white towards apex, distal half of fringe entirely white. Underside similar, the forewing paler (brightest towards costa), with markings fainter. Kangonde, Kitui, British E. Africa, 31 Dec., 1898 (R. C. Crawshay). Type in coll. Brit. Mus. Superficially extremely like *Chlorosterrha discrepans*, but differing in structure. Palpus longer than diameter of eye; forewing with SC^4 anastomosing strongly with C, well away from SC^5, R^1 separate, hindwing with M^1 very shortly stalked.

4) It should be pointed out that in this case, and probably others where SC^1 is said to run into C, it is really rather the costa and end of C that is obsolete than the continuation of SC^1, after the point of contact.

Early stages unknown.

On Packard's *Annemoria*, see our note under *Cheteoscelis*. As the type specimen has four spurs it *may* agree with the present genus, but the forewing venation is different, and altogether the probabilities are so strongly against the union that we have no alternative but to erect a new genus.

Type of the genus : *Merochlora faseolaria* (Guenée) = *Nemoria* (?) *faseolaria*, Guenée.

Geographical distribution of species. — Western U. S. A.

1. *M. faseolaria* (Guenée). California.
   Nemoria (?) *faseolaria*, Guenée, Spec. Gén. Lép. Vol. 9, p. 351 (1858).
   Nemoria (?) *fasceolaria*, Packard, Mem. Geom. U. S. A. p. 375 (1876).
   Chlorosea perviridaria, Packard, ibidem, p. 370, t. 10, f. 82 (1876).
   Chlorosea fasciolaria, Hulst, Ent. Amer. Vol. 2, p. 141 (1886).
   Annemoria faseolaria, Hulst, Trans. Amer. Ent. Soc. Vol. 23, p. 312 (1896).
2. **M. eutraphes, nov. sp.** 1), Prout. Utah.

178. Genus ANOMPHAX, Warren

Anomphax. Warren, Novit. Zool. Vol. 16, p. 74 (1909).

Characters. — Face smooth. Palpus in both sexes very short, slender, third joint small, pointed. Tongue rudimentary. Antenna rather short, in both sexes bipectinate almost to apex, the branches long in ♂, moderate in ♀. Pectus somewhat hairy. Femora glabrous. Hindtibia in ♂ not dilated, in both sexes with terminal spurs only. Abdomen not crested. Forewing with costa arched, apex moderately sharp, termen nearly straight, oblique, especially in ♂, cell fully one-half, DC^3 strongly inbent, SC^1 shortly anastomosing or connected by short bar with C, SC^2 normal, anastomosing shortly with SC^1, R^1 connate or short stalked, R^2 from much above middle of DC, M^1 separate; hindwing with costa rather long, apex rounded, termen little convex, tornus rather pronounced, cell one-half, DC^3 incurved, C closely approximated to cell to one-half or slightly more, not rapidly diverging, SC^2 stalked, R^2 from much above middle of DC, M^1 separate.

Lara. — Slender, firm, twig-like, head (and doubtless prothorax) with anterior bifid pointed projection. (Izquierdo, *An. Univ. Chile*, Vol. 53, p. 815, t. 3, f. 12.)

Pupa. — Green at first, becoming whitish; changes among leaves without making cocoon. (Izquierdo, loc. cit.)

Likely related to the previous genus; more specialized in most characters, but without the anastomosis of C of the hindwing.

Type of the genus : *Anomphax gnoma* (Butler) = *Omphax gnoma*, Butler (1909).

Geographical distribution of species. — Chili, W. Argentina.

1. *A. gnoma* (Butler). Chili, W. Argentina.
   Omphax gnoma, Butler, Trans. Ent. Soc. Lond. p. 367 (1882).
   Anomphax gnoma, Warren, Novit. Zool. Vol. 16, p. 75 (1909).

1) **Merochlora eutraphes, nov. sp.** — ♂, 32 mm. Very like *faseolaria*, agreeing in structure (termen of forewing perhaps slightly, but scarcely appreciably more oblique), but differing as follows : size considerably larger, palpus green, whitish beneath, only tipped with reddish; vertex without red line behind the white fillet; costal edge of forewing narrowly white (green at base), not red. The type specimen, in very good condition, is unfortunately somewhat faded in relaxing, but Mr. J. A. Grossbeck (to whose generosity we owe the specimen, and who possesses cotypes) informs us that the correct colour of the forewing is a clear, pale pea-green. Stockton, Utah, 2 August, 1907 (T. Spalding). Type in coll. L. B. Prout. SC^1 of forewing anastomoses at a point with C.

179. Genus EULOXIA, Warren

Euloxia. Warren, Novit. Zool. Vol. 1, p. 390 (1894).

Characters. — Face smooth. Palpus short, second joint rather strongly rough-scaled beneath, third joint minute. Tongue present. Antenna moderate, in ♂ bipectinate with long branches, apex nearly simple, ciliated; in ♀ nearly simple. Pectus somewhat hairy. Femora glabrous. Hindtibia in ♂ slender, in both sexes with four well-developed spurs. Abdomen slender, not crested. Forewing with costa slightly arched, apex rather acute, termen nearly straight, oblique, cell nearly one-half, DC incurved, SC^1 from cell, anastomosing at a point or briefly with C, SC^2 normal, anastomosing or connected with SC^1 (according to Turner occasionally free), R^1 short-stalked or approximated, M^1 separate; hindwing with costa rather long, apex rounded, termen little convex, tornus rather pronounced, cell nearly one-half, DC^2 usually rather oblique, DC^3 incurved anteriorly, C closely approximated to cell for some distance near base, rather gradually diverging, SC^2 stalked, R^2 very characteristic, M^1 connate, approximated or sometimes short-stalked.

Early stages undescribed.

An exclusively Australian genus, perhaps most nearly approached by Section III of *Hemistola*, which, however, has not the long scaling of the palpus beneath. The tendency to whitening of the hindwing and at the same time elongation of its costa, which is noticeable in several of the African forms and the single Chilian genus of the subfamily, is here distinctly indicated, and it is just possible that these forms have all a common origin in the great Antarctic Continent which recent theory assumes. The question has not been fully investigated, but it is worthy of note that these forms have quite usually a short palpus, and some venational characters in common (tendency to double anastomosis of SC^1 of forewing, separation of M^1 of both wings, etc.).

Type of the genus : *Euloxia fugitivaria* (Guenée) = *Iodis fugitivaria*, Guenée (1894).

Geographical distribution of species. — Australian.

1. *E. fugitivaria* (Guenée). — S. E. to E. Australia.
   Iodis fugitivaria, Guenée, Spec. Gén. Lép. Vol. 9, p. 354 (1858).
   Iodis intacta, Walker, List Lep. Ins. Brit. Mus. Vol. 22, p. 545 (1861).
   Iodis obliquissima, Walker, ibidem, p. 546 (1861).
   Euloxia fugitivaria, Warren, Novit. Zool. Vol. 1, p. 390 (1894).
2. *E. meandraria* (Guenée). — Pl. 5, Fig. 9. — S. E. Australia, with Tasmania.
   Iodis meandraria, Guenée, Spec. Gén. Lép. Vol. 9, p. 355 (1858).
   Euloxia meandraria, Swinhoe, Lep. Het. Oxford Mus. Vol. 2, p. 393 (1900).
3. *E. hypsithrona* (Meyrick). — New South Wales.
   Iodis hypsithrona, Meyrick, Proc. Linn. Soc. N. S. Wales (2), Vol. 2, p. 874 (1888).
   Euloxia hypsithrona, Turner, ibidem, Vol. 35, p. 581 (1910).
4. *E. leucochorda* (Meyrick). — Tasmania.
   Iodis leucochorda, Meyrick, Proc. Linn. Soc. N. S. Wales (2), Vol. 2, p. 875 (1888).
   Euloxia leucochorda, Turner, ibidem, Vol. 35, p. 580 (1910).
5. *E. beryllina* (Meyrick). — W. Australia.
   Iodis beryllina, Meyrick, Proc. Linn. Soc. N. S. Wales (2), Vol. 2, p. 877 (1888).
   Euloxia beryllina, Turner, ibidem, Vol. 35, p. 581 (1910).
6. *E. ochthaula* (Meyrick). — W. Australia.
   Iodis ochthaula, Meyrick, Proc. Linn. Soc. N. S. Wales (2), Vol. 2, p. 877 (1888).
   Euloxia ochthaula, Turner, ibidem, Vol. 35, p. 581 (1910).

7. *E. pyropa* (Meyrick). S. E. and W. Australia.
Iodis pyropa, Meyrick, Proc. Linn. Soc. N. S. Wales (2), Vol. 2, p. 878 (1888).
Euloxia pyropa, Turner, ibidem, Vol. 35, p. 581 (1910).

8. *E. argocnemis* (Meyrick). W. Australia.
Iodis argocnemis, Meyrick, Proc. Linn. Soc. N. S. Wales (2), Vol. 2, p. 883 (1888).
Chlorocoma argocnemis, Turner, ibidem, Vol. 35, p. 586 (1910).

9. *E. isadelpha*, Turner. W. Australia.
Euloxia isadelpha, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 35, p. 580 (1910).

180. Genus MIXOCHROA, Warren

Mixochroa. Warren, Novit. Zool. Vol. 5, p. 13 (1898).

Characters. — Face smooth. Eye rather smaller than normal. Palpus rather short, second joint moderately rough-scaled beneath, third joint minute. Tongue present. Antenna over one-half, in ♂ bipectinate almost to apex, the branches long, shortening rather abruptly towards apex. Pectus somewhat hairy. Femora glabrous. Hindtibia in ♂ not dilated, with four nearly equal spurs. Abdomen not crested. Forewing with costa slightly arched, apex moderately acute, termen oblique, nearly straight, cell nearly one-half, DC inbent, SC^1 from cell, anastomosing at a point or shortly with C, SC^2 normal, anastomosing with SC^1, then closely approaching or anastomosing with SC^{3+4}, R^1 connate or short-stalked, R^2 from much above middle of DC, M^1 separate; hindwing with costa rather long, apex rounded, termen faintly waved, not strongly convex, from R^1 to R^3 straight or very feebly subconcave, cell near one-half, DC^3 inangled, C closely approximated to cell to fully one-half, SC^2 stalked, R^2 very characteristic, M^1 separate.

Early stages unknown.

Related to *Euloxia*, into which Turner merges it. Differing in C of the hindwing, as well as in coloration and perhaps thicker scaling. The extremely rare anastomosis of SC^2 with SC^{3+4} is noteworthy, though even here not constant.

Type of the genus : *Mixochroa gratiosata* (Guenée) = *Nemoria gratiosata*, Guenée (1898).

Geographical distribution of species. — Australian.

1. *M. gratiosata* (Guenee). S. E. Australia with Tasmania.
Nemoria gratiosata, Guenee, Spec. Gen. Lép. Vol. 9, p. 351, t. 17, f. 1 (1858).
Iodis gratiosata, Meyrick, Proc. Linn. Soc. N. S. Wales (2), Vol. 2, p. 876 (1888).
Mixochroa gratiosata, Warren, Novit. Zool. Vol. 5, p. 13 (1898).
Euloxia gratiosata, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 35, p. 579 (1910).

181. Genus LEUCESTHES, Warren

Leucesthes. Warren, Novit. Zool. Vol. 9, p. 348 (1902).
Acibdela. Turner, Trans. Roy. Soc. S. Austral. Vol. 30, p. 130 (1906).

Characters. — Face smooth. Palpus short, slender, rather smooth. Tongue present. Antenna in ♂ bipectinate almost to apex, with long branches, in ♀ nearly simple. Pectus slightly hairy. Femora glabrous. Hindtibia in ♂ not dilated, in both sexes with four approximated spurs. Abdomen not crested.

Wings with smooth, glossy scaling. Forewing narrow, costa straight, apex moderate, termen smooth, curved, very oblique, cell fully one-half, DC^3 curved, becoming oblique. SC^1 from cell, anastomosing or connected with C, SC^2 normal, anastomosing with SC^1 and then with SC^{3-4}, R^1 stalked, R^2 from above middle of DC, M^1 separate; hindwing narrow, costa long, apex and termen rounded, tornus not pronounced, cell one-half, DC incurved, rather oblique, C closely approximated to cell to one-half, SC^2 stalked, R^2 characteristic, M^1 separate.

Early stages unknown.

No doubt related to the two preceding genera, yet not very closely. The shape and texture and the smoother palpus distinguish it from *Mixochroa*, otherwise the characters are nearly the same.

Type of the genus : *Leucesthes alba* (Swinhoe) = *Nearcha alba*, Swinhoe = *Leucesthes margarita*, Warren (1902).

Geographical distribution of species. — W. Australia

1. *L. alba* (Swinhoe). W. Australia.

Nearcha alba, Swinhoe, Ann. Mag. Nat. Hist. (7), Vol. 9, p. 79 (1902).
Leucesthes margarita, Warren, Novit. Zool. Vol. 9, p. 348 (1902).
Acibdela alba, Turner, Trans. Roy. Soc. S. Austral. Vol. 30, p. 131 (1906).
Leucesthes alba, Prout, in Wytsman, Gen. Ins. Fasc. 104, p. 2 (1910).

182. Genus HEMISTOLA, Warren

Hemistola. Warren, Proc. Zool. Soc. Lond. p. 353 (1893).
Jodis. Stephens, List Brit. Anim. Vol. 5, p. 169 (1850) (nec Hübner, Guenée restr.) 1).
Pareuchloris. Warren, Novit. Zool. Vol. 1, p. 386 (1894).

Characters. — Face smooth. Palpus in both sexes usually short to quite moderate (only elongate in one or two doubtfully-placed species), second joint with moderately appressed scales, third joint in both sexes usually small (long in *liliana* ♀). Tongue present. Antenna in ♂, and usually in ♀, bipectinate, with apex nearly simple 2). Pectus and femora hairy. Hindtibia in ♂ usually not dilated (dilated, with hair-pencil, in *rubrimargo* and one or two others), in both sexes with all spurs. Abdomen not crested. Forewing with costa arched, apex moderate to rather acute, termen moderately oblique, entire, rather straight anteriorly, more curved posteriorly, sometimes appreciably gibbous in the middle, cell less than one-half, DC deeply incurved, SC^1 from cell, free or anastomosing with C, SC^2 normal, R^1 just separate or stalked, M^1 separate or connate; hindwing with termen rather strongly convex, often elbowed, or even shortly tailed at R^3, cell less than one-half, DC^3 deeply inbent anteriorly, oblique posteriorly, C approximated to cell to near middle, SC^2 stalked (usually shortly), M^1 approximated to short-stalked. ♂ genitalia (*chrysoprasaria*) : uncus parallel, with socii, gnathos pointed, harpe with clavus extended to two strong horns, penis pestillate, vesica with band of small cornuli, eighth sternite terminating in two blunt points.

Egg. — Very flat, laid in piles of twelve to fourteen, standing out at right angles from twig like a small branch (Newman, *The Entomologist*, Vol. 6, p. 168).

1) Probably the majority of synonymists would argue that the present genus was the true *Iodis* of Hübner, and Hübner's name has been employed in that sense by Turner, *Proc. Linn. Soc. N. S. Wales*, Vol. 35, p. 579. The species *chrysoprasaria*, under the name of *vernaria*, is placed first in Hübner's *Verzeichniss*, which would weigh with many; while Stephens' restriction (though uncharacterized) has three years' priority over Lederer's (characterized) restriction, and eight over Guenée's work. We find, however, that a literal application of the International Rules of Nomenclature saves the current usage. Guenée was the first to « select a type » for *Iodis*, and he selected *lactearia* (*Spec. Gén. Lép.* Vol. 9, p. 353, 355).

2) There is much variability in detail between the different species. We are unacquainted with the ♀ of the type species, but Warren (*Novit. Zool.* Vol. 1, p. 393) says it is bipectinate, as indeed would have been expected.

Larva. — Rigid, twig-like, beautifully assimilating during hibernation and subsequently to the winter and spring coloration of its food-plant (*Clematis*); head produced to two sharp points, prothorax produced to two horns projecting over the head; body transversely wrinkled, shagreened (or frosted, each point of the shagreen being tipped with white), with strong lateral flange; anal flap produced to a point (Newman, loc. cit.; Wackerzapp, *Stett. Ent. Zeit.* Vol. 50, p. 282).

Pupa. — Not fully described. Green, the thorax smooth, but punctured. Suspended in loose cocoon among leaves (Newman, loc. cit.).

A not very sharply defined genus, which could, with almost equal propriety, be either enlarged or restricted. While on the one hand its constituents are not all very closely related, on the other hand it almost intergrades with *Euloxia*, and in Africa perhaps with *Acollesis* or *Nothoterpna*.

Type of the genus: *Hemistola rubrimargo*, Warren (1893).

Geographical distribution of species. — Palæarctic and Æthiopian Regions, India to Formosa.

Section I. — Palpus moderate (occasionally even elongate in ♀); hindwing angled; antenna in ♀ bipectinate (*Hemistola*, Warren).

1. *H. rubrimargo*, Warren. — N. India, Formosa, ?West China.
   Hemistola rubrimargo, Warren, Proc. Zool. Soc. Lond. p. 384, t. 31, f. 3 (1893).
2. *H. dijuncta* (Walker). — E. China, Japan.
   Geometra dijuncta, Walker, List Lep. Ins. Brit. Mus. Vol. 22, p. 523 (1861).
   Geometra (?) *inoptaria*, Walker, ibidem. Vol. 26, p. 1555 (1862).
   Jodis claripennis, Butler, Ann. Mag. Nat. Hist. (5), Vol. 1, p. 399 (1878); Ill. Het. Coll. Brit. Mus. Vol. 3, p. 36, t. 49, f. 10 (1879).
3. *H. veneta* (Butler). — Japan.
   Thalera veneta, Butler, Ann. Mag. Nat. Hist. (5), Vol. 4, p. 437 (1879).
   Uliocnemis venata, Leech, ibidem (6), Vol. 20, p. 232 (1897).
4. *H. liliana* (Swinhoe) (huj. gen. ?). — Khasis.
   Thalassodes liliana, Swinhoe, Trans. Ent. Soc. Lond. p. 7, t. 1, f. 2 (1892).
   Euchloris liliana, Swinhoe, ibidem, p. 175 (1894).
   Thalera liliana, Hampson, Fauna Ind. Moth. Vol. 3, p. 510 (1895).
   Hemistola liliana, Warren, Novit. Zool. Vol. 4, p. 211 (1897).
5. *H. rectilinea*, Warren. — Khasis.
   Hemistola rectilinea, Warren, Novit. Zool. Vol. 3, p. 309 (1896).
   Thalera rectilinea, Hampson, Journ. Bomb. Nat. Hist. Soc. Vol. 12, p. 93 (1898).
6. *H. insolitaria* (Leech). — Japan.
   Euchloris insolitaria ♂, Leech, Ann. Mag. Nat. Hist. (6), Vol. 20, p. 230 (1897) 1).
7. *H. parallelaria* (Leech) (huj. gen.?). — W. China.
   Thalassodes parallelaria, Leech, Ann. Mag. Nat. Hist. (6), Vol. 20, p. 241 (1897).
8. *H. inconcinnaria* (Leech) (trans. ad Sect. II). — W. China.
   Thalassodes inconcinnaria, Leech, Ann. Mag. Nat. Hist. (6), Vol. 20, p. 242 (1897).
9. *H. flavitincta* (Warren) (huj. gen.?). — Khasis.
   Hemistola (?) *flavitincta*, Warren, Novit. Zool. Vol. 4, p. 211 (1897).
10. *H. tenuilinea* (Alphéraky) (huj. gen.?). — Corea.
    Thalera tenuilinea, Alphéraky, Roman. Mem. Lep. Vol. 9, p. 182, t. 10, f. 7 (1897).
11. *H. simplex*, Warren. — Formosa.
    Hemistola simplex, Warren, Novit. Zool. Vol. 6, p. 24 (1899).

1) Leech's Chang-Yang ♀ cannot belong to this species; it is evidently a *Hemithea*, related to *unilinearia*.

Section II. — Palpus short; hindwing not or little angled; antenna in ♀ bipectinate (*Pareuchloris*, Warren).

12. *H. chrysoprasaria* (Esper). Europe, Asia Minor, ?E. Siberia.

a. *Hemistola chrysoprasaria chrysoprasaria*.

Phalaena Geometra vernaria [Schiffermuller], Schmett. Wien. p. 97 (1775) (nec Linné).

?) *Phaloena pomona* [Geoffroy], Fourcroy's Ent. Paris. p. 264 (1785) 1).

? *Phaloena nayas* [Geoffroy], ibidem, p. 270 (1785) (nom. dubium).

Phalaena Geometra chrysoprasaria, Esper, Schmett. in Abbild. Vol. 5, p. 37, t. 5, f. 1 (1794).

Phalaena Geometra aeruginaria, Borkhausen, Eur. Schmett. Vol. 5, p. 43 (1794) (nec Schiffermüller).

Phalaena lucidata, Donovan, Brit. Ins. Vol 3, p. 67, t. 97 (1795) (nec Fabricius, 1781).

Geometra vernaria, Hübner, Samml. Eur. Schmett. Geom. t 2, f. 7 (1796?); p. 16 (1800?).

Geometra volutaria, Haworth, Lep. Brit. (2), p. 298 (1809) (nec *volutata*, Fabricius).

Iodis vernaria, Hübner, Verz. bek. Schmett p. 286 (1826?).

Hemithea vernaria, Duponchel, Hist. Nat. Lép. Vol. 7 (2), p. 248, t. 152, f. 1 (1829).

Hipparchus vernarius, Stephens, Cat. Brit. Ins. (2), p. 122 (1829).

Euchloris vernaria, Meyrick, Trans. Ent. Soc Lond. p. 95 (1892).

Chlorochroma vernaria, Gumppenberg, Nova Acta Acad. Leop. d. Naturf. Halle, Vol. 64, p. 494 (1895).

Pareuchloris vernaria, Warren, Novit. Zool. Vol. 1, p. 386 (1894).

Iodis chrysoprasaria, Prout, Trans. City Lond. Ent. Soc. Vol. 10, p. 64 (1901).

b. **Hemistola chrysoprasaria lissas, nov. subsp.** 2), Prout. Central Asia.

13. *H. detracta* (Walker). N. and N. W. India.

Geometra detracta, Walker, List Lep. Ins. Brit. Mus. Vol. 22, p. 521 (1861).

Jodis detracta, Butler, Proc. Zool. Soc. Lond. p. 390 (1886).

Thalassodes unduligera, Butler, Ill. Het. Coll. Brit. Mus. Vol. 7, p. 105, t. 136, f. 6 (1889).

Euchloris detracta, Hampson, Fauna Ind. Moths, Vol. 3, p. 498 (1895).

Microloxia vestigiata, Swinhoe, Ann. Mag. Nat. Hist. (7), Vol. 16, p. 629 (1905).

Hemistola annuligera, Warren, Novit. Zool. Vol. 16, p. 125 (1909) (nov. syn.).

14. *H. zimmermanni* (Hedemann). E. Siberia.

Geometra zimmermanni, Hedemann, Hor. Soc. Ent. Ross. Vol. 14, p. 509, t. 3, f. 6 (1879).

Euchloris zimmermanni, Meyrick, Trans. Ent. Soc Lond. p. 95 (1892).

Nemoria zimmermanni, Gumppenberg, Nova Acta Acad. Leop. d. Naturf. Halle, Vol. 64, p. 490 (1895).

15. *H. haploa*, nov. nom., Prout (huj. gen.?) 3). British E. Africa.

Pareuchloris (?) *simplex*, Warren, Novit. Zool. Vol. 9, p. 496 (1902) (nec *Hemistola simplex*, Warren, 1899).

16. **H semialbida, nov. sp.** 4), Prout. — **Pl. 5, Fig. 11.** Griqualand.

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1) So determined by Werneburg, *Beitr. Schmett.* Vol. 1, p. 304, but the description is in opposition thereto.

2) **Hemistola chrysoprasaria lissas, nov. subsp.** — Termen of hindwing without the elbow at R^3; average size smaller, lines of forewing inclined towards approximation (but this last occurs as an aberration in the type form, and is probably also variable in the race *lissas*).

3) This may possibly prove to be a brightly coloured *Nothoterpna*; we have not been able to give it much study. The palpus is minute in both sexes, C of hindwing anastomoses at a point, then gradually diverging.

4) **Hemistola semialbida, nov. sp.** – ♀, 40 mm. Face, palpus and inner side of legs red. Head bright green, narrowly ochreous white between antennæ. Antennal shaft ochreous white, pectinations long, reddish ochreous. Thorax green above, whitish beneath; legs whitish externally, forecoxa marked with green. Abdomen ochreous white. Forewing above uniform bright green, the costa narrowly pale ochreous; fringe ample, green proximally, white distally. Hindwing white, faintly tinged with green, becoming green at inner margin, especially towards tornus; fringe nearly as in forewing. Underside of both wings very pale green, darkening towards the margins, especially the anterior part of forewing; costa of forewing pale ochreous. Matatiele, Griqualand East, East Cape Colony, November, 1905 (E. H. Bazeley). Type in coll. Oxford Mus. Agrees with Section II as here characterized, except that the second joint of palpus is slightly rougher scaled below, and the wings (particularly the hindwing) are somewhat differently shaped, the hindwing having the costa longer and termen less convex. Suggests in shape, and in the whitening of the hindwing, a connecting link between *Hemistola* and *Chlorosterrha* (?) *semialba*, Swinhoe.

17. **H. perviridis, nov. sp.** 1). Prout. Transvaal.
18. **H. simplicissima, nov. sp.** 2), Prout. Transvaal.
19. **H. incommoda, nov. sp.** 3), Prout (hic ponenda?). Cape Colony.

Section III. — Antenna in ♀ not bipectinate.

20 *H. dispartita* (Walker). N. W. India. E. Turkestan
Geometra dispartita, Walker, List Lep. Ins. Brit Mus. Vol. 22, p. 520 (1861)
Microloxia efformata, Warren, Proc. Zool. Soc. Lond p. 354, t. 31, f. 2 (1893).
Euchloris efformata, Hampson, Fauna Ind. Moths. Vol. 3, p. 501 (1895).
Nemoria dispartita, Hampson, ibidem, p. 502 (1895).
Eucrostes efformata, Hampson, ibidem, Vol. 4, p. 566 (1896).
Euchloris dispartita, Warren, Novit. Zool. Vol. 4, p. 390 (1897).

21. *H. cymaria* (Hampson) (præc. ab. vel var. ?) N. India.
Eucrostes cymaria, Hampson, Journ. Bomb. Nat. Hist. Soc. Vol. 14, p. 655 (1903).

22. *H. signifera* (Warren). Burma.
Ulotrichopus (?) signifera, Warren, Proc. Zool. Soc. Lond. p. 357, t. 31, f. 15 (1893).
Eucrostes signifera, Hampson, Fauna Ind. Moths, Vol. 4, p. 566 (1896).

183. Genus NEUROTOCA, Warren

Neurotoca, Warren, Novit. Zool. Vol. 4, p. 43 (1897).

Characters. — Face smooth. Palpus short, very slender, scarcely rough-scaled. Tongue wanting. Antenna less than one half, in ♀ bipectinate to near apex, with rather long branches (♂ unknown). Pectus hairy. Hindtibia with terminal spurs only. Abdomen robust. Forewing broad, costa slightly arched, apex moderate, termen curved, not very oblique, cell almost one-half, DC incurved, SC^1 from cell, free, SC^2 normal, R^1 connate or just stalked, M^1 separate; hindwing broad, apex and termen rounded, tornus rather pronounced, cell broad, not quite one-half, DC slightly incurved, C approximated to cell in second quarter, rapidly diverging, SC^2 stalked, M^1 separate.

1) **Hemistola perviridis, nov. sp.** — ♀. 3 mm. Face and palpus red; palpus minute. Vertex and antennal shaft whitish ochreous, pectinations rather long. Occiput green. Thorax and abdomen bright green above, white beneath. Legs largely deep red, except hindtibia and tarsus. Wings uniform bright green, without markings (the colour formed by dense bright deep green irroration on pale green ground); costa of forewing narrowly ochreous; fringes concolorous with wing proximally, narrowly ochreous whitish distally. Underside similar, but somewhat paler green. Pretoria, Transvaal, 25 February, 1905 (C. J. Swierstra). Type in coll. Brit. Mus. Probably closely related to *haploa*, agreeing in venation, etc., but with longer antennal pectinations and proximal part of fringe green (no red tinge in distal part). Shape and aspect are rather near *Omphax*, and it is of course possible that the discovery of the ♂ will show that sex to possess a frenulum, in which case a re-arrangement will be necessary. The same remarks apply to the next species, of which also unfortunately only the ♀ is known; it differs from *perviridis* in its smaller size, much shorter antennal pectinations and more regularly rounded hindwing; in the present species the costa of hindwing is rather long, apical region therefore rather prominent.

2) **Hemistola simplicissima, nov. sp.** — ♀. 35 mm. Extremely like the preceding species, also reminding much (except in the somewhat less sharp apex of forewing and tornus of hindwing) of *Omphax leucaspeda*. Antennal pectinations much shorter than in *perviridis* — scarcely as long as diameter of shaft, which is rather stout; face and legs as in *perviridis*; dorsum of abdomen green excepting anal extremity, which, together with venter, is white; costa of both wings relatively shorter than in *perviridis*, fringes green in proximal half, white in distal, entirely without the pinkish-grey tips of *haploa*. In both wings M^1 is well separate from R^5; in the hindwing C is less closely appressed to cell than in *haploa* and *perviridis*, but continues approximated for more than a point — i. e. the venation is more typically that of *Hemistola*; in the forewing SC^1 anastomoses shortly with C, but is well separate from SC^2. Pretoria, 3 February, 1910. Type in coll. A. J. T. Janse.

3) **Hemistola incommoda, nov. sp.** — ♂. 22 mm. Face deep red. Palpus scarcely longer than diameter of eye, deep red above, paler beneath. Vertex and antennal shaft pale ochreous, pectinations moderate, reaching to about two-thirds, giving place to subdentate structure, with short ciliation. Thorax green above. Legs ochreous, fore- and middle-leg deep red on upper and inner sides; hindtibia not dilated, the spurs very unequal, only the inner terminal long. Forewing uniform bright green, of the same shade as in typical *Omphax*; costal edge narrowly crimson; fringe concolorous with wing proximally, pale distally. Hindwing ochreous, paler towards base (possibly discoloured from green). Underside of both wings ochreous, more reddish than above, costal red shade of forewing much broadened, especially towards base, a greenish shade pervading the cell of forewing (again suggesting the possibility that the ochreous colouring may be artificial). Transkei, Cape Colony. Miss F. Barrett). Type in coll. L. B. Prout; cotype hopelessly discoloured, but easily recognizable by structure) in coll. Brit. Mus. An interesting, somewhat anomalous species which might be taken, but for the absence of frenulum, for a small, pectinate *Omphax*, while in coloration it is curiously like the Australian *Hyxochroa gratiosata*. Both cells one-half, C of forewing well separate from SC, SC^1 arising well back, anastomosing shortly with C, SC^{2-5} well before R^1, M^1 well separate; C of hindwing approximated to about one half, then moderately diverging, R^5 not extreme, M^1 well separate. Evidently very susceptible to moisture, a discoloured patch on forewing resembling in colour the hindwings and suggesting the query raised above, although we understood Mr. C. G. Barrett that no change in hindwing had occurred in relaxing.

Early stages unknown.

Affinities uncertain, ♂ altogether unknown. May be a derivative of *Nothoterpna* or *Hemistola*, but is very distinct in loss of median spurs and of tongue, etc.

Type of the genus : *Neurotoca notata*, Warren (1897).

Geographical distribution of species. — E. Africa.

1. *N. notata*, Warren. — E. Africa.
   Neurotoca notata, Warren, Novit. Zool. Vol. 4, p. 43 1897).
2. *N. endorhoda*, Hampson. — N. E. Rhodesia.
   Neurotoca endorhoda, Hampson, Proc. Zool. Soc. Lond p. 476, t. 39, f 31 (1910).

184. Genus LOPHOSTOLA, nov. gen., Prout

Lophostola, nov. gen. Prout.

Characters. — Face smooth. Palpus in ♂ rather short, in ♀ elongate, second joint long-haired below, in ♀ long, third joint in ♂ small, partly concealed, in ♀ moderately long. Tongue present. Antenna in both sexes nearly simple. Pectus somewhat hairy. Femora glabrous. (Hindlegs lost in both examples.) Abdomen with strong crests. Forewing broad, costa arched distally, apex blunt, termen convex, faintly waved, cell less than one-half, DC somewhat curved, SC^1 stalked to beyond R^1, SC^2 normal, R^1 stalked, M^1 connate or short-stalked; hindwing with termen waved, bluntly toothed at R^3, cell about two-fifths, DC rather oblique, C anastomosing quite shortly with cell, then rapidly diverging, SC^2 stalked, R^2 very characteristic, M^1 short-stalked.

Early stages unknown.

Very unfortunately, the unique ♂ is damaged at the base, but we can find no trace of frenulum; the costal dilatation is strong. The crested abdomen is distinctive, otherwise the genus might have been suspected of some relationship to *Hemistola*. Its actual affinities are doubtful.

Type of the genus : *Lophostola annuligera* (Swinhoe) = *Lophochlora annuligera*, Swinhoe.

Geographical distribution of species. — Uganda.

1. *L. annuligera* (Swinhoe). — Uganda, ? Kilima-njaro.
   Lophochlora annuligera, Swinhoe, Ann. Mag. Nat. Hist. (8), Vol. 3, p. 94 (1909).
   ? *Hemithea disjuncta* (?), Aurivillius, Schwed. Zool. Exped. Kilimanjaro (9), p. 39 (1810) (nec Walker).

185. Genus GONOCHLORA, Swinhoe

Gonochlora. Swinhoe, Trans. Ent. Soc. Lond. p. 548 (1904).

Characters. — Face smooth. Palpus in ♂ rather short, second joint shortly scaled, third joint minute. Tongue developed. Antenna in ♀ short, thick, lamellate, with strong clavate teeth. Hindtibia in ♂ slender, with terminal spurs only. Abdomen not appreciably crested. Forewing with costa somewhat arched, apex acute, termen subconcave below apex, projecting at R^3 to M^1, thence extremely oblique, subconcave, cell scarcely two-fifths, DC somewhat incurved, oblique posteriorly, SC^{1-2} coincident, from stalk of SC^{3-5}, anastomosing strongly with or running into C, R^1 about connate, R^2 from above middle, M^1 just separate; hindwing diamond-shaped, but with apex rather obtuse, termen faintly crenu-

late, produced to a strong tooth at R^3, slightly sinuate beyond, cell very short, DC somewhat oblique, C anastomosing with cell at a point, rapidly diverging, SC^2 stalked, M^1 stalked.

Early stages unknown.

Apparently more related to *Diplodesma* or to *Pamphlebia* than to any known genus in Group VI. The ♀ is at present unknown.

Type of the genus : *Gonochlora minutaria*, Swinhoe (1904).

Geographical distribution of species. — W. Africa.

1. *G. minutaria*, Swinhoe. Sierra Leone.
Gonochlora minutaria, Swinhoe, Trans. Ent. Soc. Lond. p. 548 (1904).

186. Genus CHLOROMMA, Warren

Chloromma, Warren, Novit. Zool. Vol. 3, p. 104 (1896).

Characters. — Face smooth. Palpus in ♂ moderate, second joint smooth-scaled, third joint in ♂ moderate (in ♀ probably long). Tongue present. Antenna in ♂ bipectinate with moderate branches, apical end shortly ciliated. Pectus somewhat hairy. Femora glabrous. Hindtibia in ♂ dilated with hair-pencil, all spurs present. Abdomen not crested. Forewing with costa somewhat arched, apex acutely produced, termen oblique, straight except close to apex, tornus rather pronounced, cell not quite one-half, produced apically. DC deeply incurved, SC^1 from cell, anastomosing with C, SC^2 normal, R^1 very shortly stalked, M^1 just separate; hindwing quadrate, produced to a long tail at R^3, cell rather short, C approximated rather shortly near base, rapidly diverging, SC^2 shortly stalked, M^1 shortly to very shortly stalked.

Early stages unknown.

Differs from *Iodis* in the shape of both wings, and in some other slight characters, such as the point of origin of SC^1, the somewhat different antennal structure, etc. The palpus is still smoother-scaled than in *Hemistola*, the hindwing differently shaped. We do not know the ♀.

Type of the genus : *Chloromma mimica*, Warren (1896).

Geographical distribution of species. — Assam.

1. *C. mimica*, Warren. Assam.
Chloromma mimica, Warren, Novit. Zool. Vol. 3, p. 105 (1896).

187. Genus IODIS, Hübner

Iodis 1), Hübner, Verz. bek. Schmett. p. 285 (1820?); Guenée, Spec. Gén. Lép. Vol. 9, p. 353 (1858).
Leucoglyphica, Warren, Novit. Zool. Vol. 1, p. 391 (1894).

Characters. — Face smooth. Palpus moderate to long, second joint smooth or quite slightly roughened, third joint in both sexes smooth, distinct, in ♂ moderate, in ♀ longer. Tongue present. Antenna in ♂ bipectinate to beyond one-half, usually with rather long, well-ciliated, obliquely-directed

1) Some of our English authors, as well as Scudder in the *Nomenclator Zoologicus*, have misunderstood the German usage with regard to the letter I-J, and since Hübner of course uses the round form J, have misquoted this name as *Jodis*. To be consistent, they will also have to write *Plusia iota*, etc.

branches, recalling those of *Thalassodes*, a rather long apical portion nearly simple; in ♀ nearly simple. Pectus somewhat hairy. Femora typically fringed with some fine hair. Hindtibia in ♂ dilated with hair-pencil, in both sexes with all spurs. Hindtarsus in ♂ typically short. Abdomen not crested. Forewing with costa arched, apex moderate to sharp, termen oblique, usually little convex, cell less than one-half, DC somewhat curved, SC^1 stalked (or, exceptionally, connate or closely approximated) with SC^{2-5}, usually anastomosing with C, SC^2 normal 1), very rarely anastomosing with SC^2, R^1 connate or short-stalked, M^1 connate or short-stalked; hindwing elongate, subquadrate, but apex rather rounded, termen nearly always with an elbow or slight tail at R^3, otherwise smooth, or nearly so 2), cell rather short, DC^3 more or less incurved anteriorly, C shortly approximated to cell near base, rapidly diverging, SC^2 stalked, M^1 stalked. ♂ genitalia : uncus pointed, with socii, gnathos pointed, harpe indented on the outer margin, with diaphanous connection, penis pestillate, eighth sternite terminating in two hard scobinated lobes. Show more or less close resemblance to those of *Prasinocyma*, *Hemistola chrysoprasaria*, *Berta*, *Comostola*, etc.

Egg. — Apparently undescribed.

Larva. — Very slender, twig-like, transversely wrinkled, head deeply cleft, produced into two points, prothorax provided with two small points projecting over head, anal flap narrow, triangular (Hofmann, *Raupen d. Grossschmett. Eur.* p. 161, 162; we are acquainted with no very full description).

Pupa. — Rather slender, light brown, wing-veins and antenna-case dark, anal armature consisting of four pairs of very small hooks.

Probably an almost direct derivative of *Gelasma*, by the loss of frenulum in the ♂. The stalking of SC^1 of the forewing seems here to be becoming a fixed character, but a very occasional exception prevents our using it as quite absolute. The species are mostly slender, smoothly-scaled, and not rarely more or less iridescent. As regards Warren's *Leucoglyphica* (type, *fasciata*), we have not seen the ♂, but believe that Swinhoe (*Lep. Het. Oxford Mus.* Vol. 2, p. 404) is right in sinking it. It is probably slightly aberrant in having more shortly pectinate antenna, but we can find no other structural distinction — an exceedingly slight elbow in the termen of forewing and a slight accentuation of the tail of hindwing are clearly inadequate for generic separation.

Type of the genus : *Iodis lactearia* (Linné) = *Phalaena Geometra lactearia*, Linné (1858).

Geographical distribution of species. — Europe, Asia.

Section I. — Wings often iridescent; forewing with SC^2 normal; hindwing always angled at R^3.

1. *I. lactearia* (Linné). Europe to Japan, Asia Minor.

Phalaena Geometra lactearia, Linné, Syst. Nat (ed 10), p. 519 (1758).
Phalaena Geometra vernaria, Linné, Fauna Suec. (ed. 2), p. 323 (1761).
Phalaena Geometra aeruginaria [Schiffermüller], Schmett. Wien. p. 314 (1775).
Phaloena lactea [Geoffroy], Fourcroy's Ent. Paris. p. 273 (1785).
Phalaena Geometra decolorata, De Villers, Linn. Ent. Vol. 2, p. 385 (1789).
Phalaena Geometra putataria, Esper, Schmett. in Abbild. Vol. 5, p. 25, t. 2, f. 4-6 (1794) nec Linné).
Geometra aeruginaria, Hübner, Samml. Eur. Schmett. Geom. t. 9, f. 46 (1796?); p. 17 (1800?).
Geometra putataria, Haworth, Lep. Brit. (2), p. 300 (1809).
Iodis aeruginaria, Hübner, Verz. bek. Schmett. p. 286 (1826?).
Ptychopoda putataria, Stephens, Cat. Brit. Ins. (2), p. 153 (1829).

1) In *unifascia* and *albidentula*, which might form a separate genus, SC^2 is stalked to well beyond SC^5.
2) Termen of hindwing precticallly quite rounded in *micra* and *albidentula*, little elbowed in *unifascia*.

Hemithea putataria, Duponchel, Hist. Nat. Lép. Vol. 7 (2), p. 242, t. 151, f. 3 (1829).
Hemithea aeruginaria, Duponchel, ibidem, p. 244, t. 152, f. 6 (1829).
?*Chlorochroma aeruginaria*, Duponchel, Cat. Méth. Lép. Eur. p. 224 (1845).
Chlorochroma putataria, Duponchel, ibidem, p. 224 (1845).
Iodis lactearia, Guenée, Spec. Gén. Lép. Vol. 9, p. 355 (1858).
Iodis norbertaria, Rossler, Stett. Ent. Zeit. Vol. 38, p. 365 (1877) (var. vel ab.?).
Euchloris lactearia, Meyrick, Trans. Ent. Soc. Lond. p. 95 (1892).
Thalera lactearia, Staudinger, Cat. (ed. 3), p. 264 (1901).

2. *I. putata* (Linné). — Central Europe to Armenia, E. Asia.
Phalaena Geometra putata, Linné, Syst. Nat. (ed. 10), p. 523 (1758).
Phalaena Geometra putatoria, Linné, Fauna Suec. (ed. 2), p. 323 (1761).
Phalaena Geometra micantaria, Esper, Schmett. in Abbild. Vol. 5, p. 28, t. 2, f. 7, 8 (1794).
Geometra putataria, Hubner, Samml. Eur. Schmett. Geom. t. 2, f. 10 (1796?); p. 17 (1800?).
Iodis putataria, Hübner, Verz. bek. Schmett. p. 286 (1826?).
Hemithea putataria, Boisduval, Gen. et Ind. Meth. Eur. Lep. p. 180 (1840).
Iodis putata Staudinger, Cat. (ed. 1), p. 62 (1861).
Iodis alliata, Hofner, Jahr.-Ber. Nat. Landesmus. Karnthen, Vol. 14, p. 266 (1880).
Euchloris alliata, Meyrick, Trans. Ent. Soc. Lond. p. 95 (1892).
Euchloris putata, Meyrick, ibidem, p. 95 (1892).
Thalera putata, Staudinger, Cat. (ed. 3), p. 264 (1901).

3. *I. caudularia* (Guenée). — India with Ceylon.
?*Phalaena immacularia*, Fabricius, Ent. Syst. Vol. 3 (2), p. 131 (1794) nec Gmelin (1790).
Nemoria caudularia, Guenée, Spec. Gén. Lép. Vol. 9, p. 349 (1858).
Thalassodes nanda, Walker, List Lep. Ins. Brit. Mus. Vol. 22, p. 552 (1861).
Thalera undularia, Hampson, Ill. Het. Coll. Brit. Mus. Vol. 8, p. 109, t. 151, f. 2 (1891).
Thalera caudularia, Hampson, Fauna Ind. Moths, Vol. 3, p. 515, f. 226 (1895).
Jodis caudularia, Swinhoe, Lep. Het. Oxford Mus. Vol. 2, p. 404 (1900).

4. *I. opalaria*, Guenée. — India to Borneo.
Iodis opalaria, Guenée, Spec. Gén. Lép. Vol. 9, p. 357 (1858).
Thalera (?) *subtractata*, Walker, List Lep. Ins. Brit. Mus. Vol. 26, p. 1753 (1862).
Thalassodes opalaria, Hampson, Fauna Ind. Moths, Vol. 3, p. 509 (1895).
Iodis spumitera, Warren, Novit. Zool. Vol. 5, p. 235 (1898).

5. *I. argutaria* (Walker). — N. India, S. China, ?Japan.
Thalera argutaria, Walker, List Lep. Ins. Brit. Mus. Vol. 35, p. 1614 (1866).
Gelasma concolor, Warren, Proc. Zool. Soc. Lond. p. 352 (1893).
[*Iodis*] *argutaria*, Warren, Novit. Zool. Vol. 3, p. 107 (1896).

6. *I. praerupta* (Butler). — Japan, Amur.
Thalassodes praerupta, Butler, Ill. Het. Coll. Brit. Mus. Vol. 2, p. 49, t. 36, f. 5 (1878).
Thalera praerupta, Leech, Ann. Mag. Nat. Hist. (6), Vol. 20, p. 243 (1897).
Iodis steroparia, Püngeler, Iris, Vol. 21, p. 292, t. 4, f. 8 (1908) (nov. syn.).

7. *I. pallescens* (Hampson). — Nilgiris.
Geometra pallescens, Hampson, Ill. Het. Coll. Brit. Mus. Vol. 8, p. 108, t. 151, f. 3 (1891).
Leucoglyphica pallescens, Warren, Novit. Zool. Vol. 1, p. 391 (1894).
Thalera pallescens, Hampson, Fauna Ind. Moths, Vol. 3, p. 516 (1895).

8. *I. irregularis* (Warren). — N. India.
Gelasma irregularis, Warren, Novit. Zool. Vol. 1, p. 392 (1894).

9. *I. annulifera*, Warren. — Assam.
Iodis annulifera, Warren, Novit. Zool. Vol. 3, p. 107 (1896).
Thalassodes annulifera, Hampson, Journ. Bomb. Nat. Hist. Soc. Vol. 12, p. 92 (1898).

10. *I. coeruleata*, Warren. — Assam.
Iodis coeruleata, Warren, Novit. Zool. Vol. 3, p. 107 (1896).

11. *I. inumbrata*, Warren. — Assam.
Iodis inumbrata, Warren, Novit. Zool. Vol. 3, p. 107 (1896).

12. *I. iridescens*, Warren. — Assam.
Iodis iridescens, Warren, Novit. Zool. Vol. 3, p. 108 (1896).

13. *I. delicatula*, Warren. — Assam.
Iodis delicatula, Warren, Novit. Zool. Vol. 3, p. 309 (1896).

14. *I. sinuosaria* (Leech). — China, Japan.
Thalera sinuosaria, Leech, Ann. Mag. Nat. Hist. (6), Vol. 20, p. 244 (1897).

15. *I. dentifascia*, Warren. — Japan, Corea.
Iodis dentifascia, Warren, Novit. Zool. Vol. 4, p. 212 (1897).

16. *I. micra*, Warren. — Bali.
Iodis micra, Warren, Novit. Zool. Vol. 4, p. 212 (1897).

17. *I. albipuncta*, Warren. — Assam.
Iodis albipuncta, Warren, Novit. Zool. Vol. 5, p. 13 (1898).
Thalera albipuncta, Hampson, Journ. Bomb. Nat. Hist. Soc. Vol. 14, p. 656 (1903).

SECTION II. — Wings not iridescent; forewing with SC^2 stalked to beyond SC_5; hindwing rounded or only very weakly elbowed (gen. div.?).

18. *I. unifascia* (Hampson). — Nilgiris.
Thalera unifascia, Hampson, Ill. Het. Coll. Brit. Mus. Vol. 8, p. 110, t. 151, f. 7 (1891).

19. *I. albidentula* (Hampson). — Ceylon.
Euchloris albidentula, Hampson, Journ. Bomb. Nat. Hist. Soc. Vol. 18, p. 53, t. E, f. 41 (1807).

NOTE. — *Iodis clarissa*, Butler, *Ill. Het. Coll. Brit. Mus.* Vol. 2, p. 49, t. 36, f. 4 (1878) belongs to the *Geometrinae* (*Boarmiinae*). *Iodis* (?) *olivacea*, Felder, *Reise Novara*, *Lep. Het.* t. 128, f. 13, to the *Larentiinae* (genus *Amaurinia*). Other erroneously referred species have been corrected in Hampson's *Fauna Ind. Moths* (Vol. 3) and Turner's recent revision of the Subfamily.

188. GENUS BERTA, WALKER

Berta. Walker, List Lep. Ins. Brit. Mus. Vol. 26, p. 1621 (1862).

Characters. — Face smooth. Palpus moderate to long, slender, second joint rather long, smooth-scaled, third joint in ♂ moderate, in ♀ long to very long. Tongue present. Antenna about as in *Iodis*. Pectus slightly hairy. Femora glabrous. Hindtibia in ♂ dilated with hair-pencil, in both sexes with all spurs. Abdomen not crested. Forewing with costa arched, apex moderate to rather sharp, termen oblique, more or less curved, cell less than one-half, DC^2 incurved, so that R^2 appears almost as its continuation. DC^3 arising somewhat distally, SC^1 stalked with $SC^{2\,5}$, usually anastomosing with C (but see *chrysolineata zygophyxia*), SC^2 normal (in *olivescens* anastomosing with SC^1). R^1 connate or more usually very short-stalked, M^1 separate; hindwing elongate, apex nearly rounded, termen crenulate or subcrenulate (excepting *persimilis*) with a tail at R^3 and (excepting *acte* and *persimilis*) a smaller tooth at R^1 and an excision between, cell rather short, DC^2 strongly oblique, somewhat curved, SC^3 arising distally, somewhat curved, C shortly appressed to cell near base, rapidly diverging, SC^2 stalked, M^1 stalked (sometimes very shortly). ♂ genitalia : uncus pointed, with socii, gnathos pointed, harpe

with short projecting clasper, vinculum rounded, eighth sternite terminating in two lobes (*chrysolineata leucospilota*).

Early stages unknown.

Closely related to *Iodis*, differing chiefly in the form of the discocellulars, especially the incurvature of DC^2 of the forewing. We have seen one aberrant example of *chrysolineata* in which, in the hindwing, DC^3 is an almost straight continuation of DC^2, but the oblique course of the two, and the lack of any incurve in DC^3 still keep the form distinct from *Iodis*. It is just possible the genera will prove to intergrade through some forms akin to *Berta acte* and *persimilis* (in which the hindwing lacks the typical excision of *Berta*) and *Iodis opalaria* or *iridescens* (in which the discocellulars of the *hind*wing are inclined to assume the *Berta* course), but at present there is no difficulty at all in keeping the two genera apart. The very long ♀ palpus, the shape of the hindwing, and to some extent of forewing (costa and termen inclined to be more rounded) and the separation of M^1 of forewing at its origin from R^5, usually afford further distinctions.

Type of the genus : *Berta chrysolineata*, Walker (1862).

Geographical distribution of species. — India to N. Australia, W. Africa.

Section I. — Hindwing with termen more or less crenulate.

1. *B. chrysolineata*, Walker. — India with Ceylon, Dutch New Guinea.
   - a. *Berta chrysolineata chrysolineata*.
     Berta chrysolineata, Walker, List Lep. Coll. Brit. Mus. Vol. 26, p. 1621 (1862).
     Thalera chrysolineata, Hampson, Fauna Ind. Moths, Vol. 3, p. 510 (1895).
   - b. *Berta chrysolineata zygophyxia*. — Singapore, Bali.
     Berta chrysolineata zygophyxia, nov. subsp. [1], Prout.
   - c. *Berta chrysolineata leucospilota*. — N. Australia.
     Euchloris leucospilota, Turner, Trans. Roy. Soc. S. Austral. Vol. 28, p. 221 (1904).
     Berta chrysolineata, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 35, p. 504 (1910).
2. *B. vaga* (Walker). — Borneo.
   Thalera vaga, Walker, List Lep. Ins. Brit. Mus. Vol. 22, p. 598 (1861).
   Berta vaga, Swinhoe, Lep. Het. Oxford Mus. Vol. 2, p. 405, t. 6, f. 8 (1900).
3. *B. acte* (Swinhoe). — Assam, Ceylon, ?W. China.
   Thalera acte, Swinhoe, Trans. Ent. Soc. Lond. p. 6, t. 1, f. 13 (1892) [2].
   Euchloris acte, Swinhoe, ibidem, p. 175 (1894).
4. *B. albiplaga*, Warren. — N. India.
   Berta albiplaga, Warren, Proc. Zool. Soc. Lond. p. 357, t. 31, f. 5 (1893).
5. *B. discolor*, Warren. — Padang.
   Berta (?) *discolor*, Warren, Novit. Zool. Vol. 1, p. 380 (1894).
6. *B. olivescens*, Warren. — Fergusson Island.
   Berta olivescens, Warren, Novit. Zool. Vol. 3, p. 287 (1896).

Section II. — Hindwing with termen not crenulate.

7. *B. persimilis* (Warren). — Niger to Cameroons.
   Chloromma persimilis, Warren, Novit. Zool. Vol. 4, p. 36 (1897).

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1) **Berta chrysolineata zygophyxia, nov. subsp.** — Shape and markings as in the Indian race *chrysolineata* of the dull olive, moderately white-marked type, but with different venation, SC^1 of forewing arising just before end of cell (therefore well before R^1, whereas in the name-type it is stalked to beyond R^1), not anastomosing with C; forewing on the average rather broad, a rather conspicuous white spot in its apex. Singapore (2 ♀), Bali (2 ♂), all in coll. Brit. Mus. Will probably prove a constant form, or even species.

2) *Geometra acte* on type label.

189. Genus LAMBORNIA, nov. gen., Prout

Lambornia, nov. gen. Prout.

Characters. — Face smooth, broad. Palpus slender, in ♂ shortish, in ♀ moderate, second joind smooth-scaled, third joint distinct, in ♂ not minute, in ♀ elongate. Tongue developed. Antenna rather short, in both sexes bipectinate to rather near apex, the branches quite moderate. Pectus somewhat hairy. Femora glabrous. Hindtibia in both sexes with a pair of unequal terminal spurs, the median wanting. Abdomen with minute raised dorsal spots (embryo crests). Forewing short and broad, costa arched, apex blunt, termen subcrenulate, curved, becoming oblique, cell short, DC slightly incurved, oblique posteriorly, SC^1 from cell, anastomosing strongly with C, SC^2 from stalk of SC^{3-5}, anastomosing strongly with SC^1, or even with $C + SC^1$ before their separation, R^1 about connate, R^2 from about centre of DC, M^1 connate; hindwing elongate, apex rounded off, termen dentate, with stronger teeth at R^1 and R^3, excised between, tornus rather pronounced, inner margin very long, cell very short, DC not much curved, sometimes slightly angled at origin of R^2, C closely approximated to one-half cell or less, then rapidly diverging, SC^2 long-stalked, R^2 from little above middle, sometimes almost central, M^1 long-stalked.

Early stages unknown.

A thoroughly distinct genus. Perhaps nearest in facies to *Berta*, but differing in several characters (tibial armature, antennal structure, origin of SC^1, stumpier forewing). May be derived from an immediate ancestor of *Berta*, prior to the stalking of SC^1.

Type of the genus : *Lambornia inspiciens*, nov. sp., Prout.

Geographical distribution of species. — Equatorial Africa.

1. **L. inspiciens, nov. sp.** 1), Prout. Uganda, Lagos.

190. Genus COMOSTOLA, Meyrick

Comostola. Meyrick, Proc. Linn. Soc. N. S. Wales (2), Vol. 2, p. 869 (1888).
Leucodesmia. Warren, Novit. Zool. Vol. 6, p. 25 (1899) (nec Howard, 1895).

Characters. — Face smooth. Palpus slender, in ♂ moderate to rather long, in ♀ long, second joint smooth-scaled, third joint smooth, distinct, in ♂ moderate (rarely short), in ♀ long. Tongue present. Antenna moderate, in ♂ bipectinate to two-thirds with long branches, in ♀ serrate or simple. Pectus almost glabrous. Femora glabrous. Hindtibia in ♂ dilated, with hair-pencil and sometimes a short terminal process, in both sexes with all spurs. Abdomen not crested. Forewing with costa slightly to moderately arched, apex usually acute, termen oblique, nearly straight or curved, tornus in typical

1) **Lambornia inspiciens, nov sp** — ♂ ♀, 19-22 mm. Face dull olive-green. Palpus reddish above, whitish beneath. Vertex and base of antennal shaft white, the latter distally reddish ochreous. Thorax fuscous olive above, abdomen at base dorsally tinged with reddish fuscous, otherwise paler, with minute reddish-fuscous raised spots. Wings white, smoothly scaled, copiously spotted and blotched with dull olive. Forewing with some slight markings at base, especially on costa; two diffuse, ill-defined bars at about one-fifth, from costa to M, the outer joining the median band; a diffuse, ill-defined, interrupted broad band somewhat before middle, its anterior half consisting of a costal mark and an ovate, white surrounded blotch, bounded posteriorly by M, its posterior half somewhat broader, some clouding following between M^1 and M^2, some spots between the radials, distal area with some costal marks and some subterminal blotches between the radials and at tornus. Hindwing with a small blotch at end of cell, irregular interrupted lines proximally and distally to this; an interrupted dentate line at about two-thirds, nearly parallel with termen; a subterminal band, or series of blotches, somewhat interrupted from R^3 to near tornus. Underside white, unmarked, costa of forewing narrowly ochreous-tinted, more broadly so at base. Entebbe, Uganda, 1905 (E. A. Minchin); type (♂) in coll. Brit. Mus. Oni, Lagos, in forest with natural clearings, below 100 feet (W. A. Lamborn); co-types (1 ♂, 1 ♀) in coll. Oxford Mus., the ♀ dated 15 April, 1910.

section well marked, cell less than one-half, DC^2 incurved, DC^3 arising further distally (sometimes much further, in *maculata* very little further), SC^1 arising close to or out of the stalk of SC^{2-5}, in the type and a few others stalked to beyond R^1, R^1 usually stalked, M^1 connate or short-stalked; hindwing with termen slightly bent at R^3, or strongly rounded, tornus usually pronounced, inner margin long, cell short, DC slightly oblique, usually nearly straight, sometimes DC^2 and DC^3 separately (weakly) incurved, forming an angle at origin of R^2, C anastomosing with cell at a point near base, rapidly diverging, M^1 stalked, M^2 from close to end of cell (**Pl. 4, Fig. 17**). ♂ genitalia with uncus parallel, bifurcate at the extreme tip, socii terminating in a strong horn, gnathos pointed, harpe with arum-lily-shaped clasper, penis pestillate.

Early stages unknown.

Associated with *Berta* in the form of DC of the forewing. That this can have been independently acquired is suggested by a few other genera, but the genitalia and one or two other characters point to the possibility of a real connection in the present case. The superficial aspect is totally dissimilar. There may probably be a relationship with *Hemistola* through *C. ovifera* and Section III of that genus.

Type of the genus : *Comostola laesaria* (Walker) = *Iodis laesaria*, Walker = *Comostola perlepidaria*, Meyrick (1888).

Geographical distribution of species. — Indo-Australian.

SECTION I. — Termen of hindwing not strongly rounded, but nearly always bent at R^3; antenna of ♀ usually serrate (*Comostola*, Warren).

1. *C. laesaria* (Walker). — S. India to Australia.
   Iodis laesaria, Walker, List Lep. Ins. Brit. Mus. Vol. 22, p. 544 (1861).
   Eucrostis perlepidaria, Walker, ibidem, Vol. 35, p. 1610 (1866).
   Thalera laesaria, Moore, Lep. Ceyl. Vol. 3, p. 429 (1887).
   Comostala perlepidaria, Meyrick, Proc. Linn. Soc. N. S. Wales (2), Vol. 2, p. 869 (1888).
   Euchloris subtiliaria (part.), Hampson, Fauna Ind. Moths, Vol. 3, p. 500 (1895) (nec Bremer).
   Comostola laesaria, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 35, p. 566 (1910).
2. *C. meritaria* (Walker). — Ceylon.
   Geometra meritaria, Walker, List Lep. Ins. Brit. Mus. Vol. 22, p. 522 (1861).
   Thalera meritaria Moore, Lep. Ceyl. Vol. 3, p. 429 (1887).
3. *C. subtiliaria* (Bremer). — E. Siberia, China.
   Euchloris subtiliaria, Bremer, Mém. Acad. Sc. St-Pétersb. Vol. 8, p. 70, t. 6, f. 23 (1864).
   Phorodesma subtiliaria, Staudinger, Cat. (ed. 2), p. 144 (1871).
4. *C. nympha* (Butler) (præc. var. vel syn.?). — Japan, China, ?Formosa.
   Racheospila nympha, Butler, Trans. Ent. Soc. Lond. p. 411 (1881).
5. *C. leucomerata* (Walker). — E. Australia.
   Chlorochroma leucomerata, Walker, List Lep. Ins. Brit. Mus. Vol. 35, p. 1609 (1866).
   Iodis leucomerata, Meyrick, Proc. Linn. Soc. N. S. Wales (2), Vol. 2, p. 889 (1888).
   Comostola leucomerata, Turner, ibidem, Vol. 35, p. 567 (1910).
6. *C. maculata* (Moore). — N. and N. W. India.
   Comibaena maculata, Moore, Proc. Zool. Soc. Lond. p. 638 (1867).
   Euchloris subtiliaria, Hampson, Fauna Ind. Moths, Vol. 3, p. 500, f. 221 (1895) (nec Bremer).
   Eucrostes subtiliaria, Hampson, ibidem, Vol. 4, p. 566 (1896).
7. *C. nereidaria* (Snellen). — Celebes to Fergusson Island, N. Australia.
   Iodis nereidaria, Snellen, Tijdschr. v. Ent. Vol. 24, p. 76, t. 10, f. 10, 11 (1881).

Comostola neseidaria, Meyrick, Trans. Ent. Soc. Lond. p. 492 (1889).
Comostola flavicincta, Warren, Novit. Zool. Vol. 3, p. 288 (1896).
Comostola neseidaria, Warren, ibidem, p. 306 (1896).
?*Euchloris subtiliaria*, Pagenstecher, Zoologica, Vol. 29, p. 154 (1900) (nec Bremer).

8. *C. ovifera* (Warren). — Sikkim, Tibet.
Euchloris (?) ovifera, Warren, Proc. Zool. Soc. Lond. p. 358 (1893).
Eucrostes ovifera, Hampson, Fauna Ind. Moths, Vol. 4, p. 566 (1896).

9. *C. mundata*, Warren. — Khâsis.
Comostola mundata, Warren Novit. Zool. Vol. 3, p. 105 (1896).

10. **C. inops, nov. sp.**, Prout 1). — Kashmir.

11. *C. flavifimbria*, Warren. — British New Guinea.
Comostola flavifimbria, Warren, Novit. Zool. Vol. 13, p. 86 (1906).

12. *C. rufimargo*, Warren. — British New Guinea.
Comostola rufimargo, Warren, Novit. Zool. Vol. 13, p. 86 (1906).

13. *C. haplophanes*, Turner. — N. Queensland.
Comostola haplophanes, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 35, p. 567 (1910).

Section II. — Termen of hindwing strongly rounded; antenna of ♀ simple (*Leucodesmia*, Warren, nom. præocc.).

14. *C. dispansa* (Walker). — Ceylon.
Comibaena dispansa, Walker, List Lep. Ins. Brit. Mus. Vol. 22, p. 574 (1861).
Racheospila dispansa, Hampson, Ill. Het. Coll. Brit. Mus. Vol. 9, p. 146, t. 170, f. 5 (1893).
Euchloris dispansa, Hampson, Fauna Ind. Moths, Vol. 3, p. 499 (1895).
Comostolodes dispansa, Warren, Novit. Zool. Vol. 3, p. 309 (1896).
Leucodesmia dispansa, Warren, ibidem, Vol. 6, p. 25 (1899).
Comostola dispansa, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 35, p. 568 (1910).

15. *C. chlorargyra* (Walker). — India to Borneo, New Guinea, N. E. Australia.
Comibaena chlorargyra, Walker, List Lep. Ins. Brit. Mus. Vol. 22, p. 577 (1861).
Euchloris dispansa (part.), Hampson, Fauna Ind. Moths, Vol. 3, p. 499 (1895) (nec Walker).
Leucodesmia chlorargyra, Warren, Novit. Zool. Vol. 6, p. 25 (1899).
Comostola chlorargyra, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 35, p. 568 (1910).

16. *C. minutata* (Druce) (præc. var.?). — New Guinea to Bismarck Archipelago.
Iodis minutata, Druce, Proc. Zool. Soc. Lond. p. 577 (1888).
Comostola conchylias, Meyrick, Trans. Ent. Soc. Lond. p. 490 (1889) (nov. syn.).
Leucodesmia conchylias, Warren, Novit. Zool. Vol. 6, p. 25 (1899).
Leucodesmia minutata, Warren, ibidem, p. 25 (1899).

17. *C. confusa* (Warren). — Ceylon.
Leucodesmia confusa, Warren, Novit. Zool., Vol. 12, p. 422 (1905).

18. *C. eucraspeda*, Turner. — N. Australia.
Comostola eucraspeda, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 35, p. 568 (1910).

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1) **Comostola inops, nov. sp.** — ♂, 26 mm. Face bright red above, white below. Palpus yellow above, narrowly white at end of second joint, whitish beneath. Antenna pale yellow, whitish at base. Legs whitish, tinged with yellow. Head green, narrowly whitish between antennæ. Thorax green above. Abdomen whitish, marked with pale above. Wings bright green (less bluish than in *ovifera* and *maculata*), markings creamy white, consisting in both wings of a moderate-sized oval discal spot and a postmedian series of rather large vein-spots, those on the hindwing larger and partly confluent; on both wings, but especially on hindwing, the line thus formed makes an inward curve in posterior half, reaching inner margin at not much beyond (on hindwing not beyond) the middle; the red-brown marking in centre of discal spots is confined in forewing to a few scales, hardly noticeable, in hindwing making a fairly complete circlet, but dull and weak; fringes creamy white. Underside paler green, unmarked. Lidderwat, Liddan Valley, Kashmir, 6,700 feet, 10 July, 1904 (C. H. Ward). Type in coll. Brit. Mus. Intermediate between *ovifera* and *maculata*, the markings more as in the latter, but with red terminal line entirely absent, less displacement of postmedian series of spots, more evenly rounded hindwing, etc. The angulation of DC in forewing is not very strong.

191. Genus COMOSTOLOPSIS, Warren

Comostolopsis Warren, Novit. Zool. Vol. 9, p. 494 (1902).

Characters. — Face smooth. Palpus in both sexes long, very slender, second joint smooth-scaled, third joint moderate to elongate in ♂, rather long to long in ♀. Tongue present. Antenna moderate, in ♂ bipectinate with long, stout branches, apical portion nearly simple; in ♀ subserrate (in *apicata* strongly bipectinate). Pectus scarcely hairy. Femora glabrous. Hindtibia in ♂ not dilated, in both sexes with all spurs. Abdomen not crested. Forewing with costa somewhat arched, apex moderate to rather acute, termen straight, tornus pronounced, cell short, DC^3 much incurved, SC^1 rather long-stalked, anastomosing with C^1 or free, SC^2 normal, typically anastomosing with SC^1, R^1 short-stalked, M^1 stalked; hindwing with termen rounded, or scarcely appreciably bent at R^3, cell short, DC^3 incurved, C anastomosing with or appressed to cell at a point near base, then rapidly diverging 1), SC^2 stalked, M^1 stalked, M^2 from close to angle, or connate, or even very shortly stalked with R^3 and M^1.

Early stages unknown.

A close relative of *Comostola*; one species (*stillata*) is marvellously like that genus in every detail of appearance, certainly betokening affinity, not mere convergence; and as the sole distinction of importance is in the discocellulars, it is possible that *Comostolopsis* ought to be sunk, and our analyses recast.

Type of the genus : *Comostolopsis simplex*, Warren (1902).

Geographical distribution of species. — Africa (chiefly S. and E.).

1. *C. simplex*, Warren. — British E. Africa, ? Natal.
   Comostolopsis simplex, Warren, Novit. Zool. Vol. 9, p. 494 (1902).
   Euchloris simplex, Swinhoe, Trans. Ent. Soc. Lond. p. 543 (1904).
2. *C. stillata* (Felder). — S. Africa to Niger and Uganda.
   Nemoria stillata, Felder, Reise Novara, Lep. Het. t. 127, f. 17 (1875).
   Eucrostes rubristicta, Warren, Novit. Zool. Vol. 6, p. 23 (1899).
   Eucrostis rufostellata, Mabille, Ann. Soc. Ent. Fr. Vol. 68, p. 740 (1900) (nov. syn.).
   Comostolopsis stillaria, Warren, Novit. Zool. Vol. 9, p. 493 (1902).
3. *C. apicata* (Warren). — Natal to Cape.
   Pareuchloris apicata, Warren, Novit. Zool. Vol. 5, p. 14 (1898).
   Phorodesma (?) *fuscipuncta*, Warren, ibidem, Vol. 6, p. 291 (1899).
4. *C. capensis* (Warren) 2). — Cape.
   Aplodes capensis, Warren, Novit. Zool. Vol. 6, p. 291 (1899).
5. *C. coerulea*, Warren. — British E. Africa.
   Comostolopsis coerulea, Warren, Novit. Zool. Vol. 9, p. 494 (1902).
6. *C. undulilinea* (Warren) (huj. gen.?). — Sierra Leone.
   Eucrostes undulilinea, Warren, Novit. Zool. Vol. 12, p. 384 (1905).

192. Genus PYRRHORACHIS, Warren

Pyrrhorachis. Warren, Novit. Zool. Vol. 3, p. 292 (1896).
Pyrrhorhachis. Turner, Proc. Linn. Soc. N. S. Wales, Vol. 35, p. 569 (1910).

Characters. — Face smooth. Palpus long and slender, second joint long, smooth-scaled, third joint long, especially in the ♀. Tongue present. Antenna in ♂ bipectinate to beyond one-half

1) Only in *undulilinea*, which is probably not strictly congeneric (SC^5 of forewing arising just before SC^2, etc.), approximated to about one-half of cell.

2) Type lost (mislaid), but evidently belongs to this genus, perhaps an ab. or var. of *simplex*, with discal spot obsolete (as we have seen a specimen from Durban) and with the pale line nearer the termen. The rest of the description fits exactly.

with long, abruptly ceasing branches, in ♀ simple. Pectus scarcely hairy. Femora glabrous. Hindtibia in ♂ dilated, in both sexes with two pairs of unequal spurs. Abdomen not appreciably crested. Forewing with costa very slightly arched, apex moderate, termen entire, bowed, oblique, cell short, DC^3 usually incurved (occasionally DC^{2-3} forming one gentle, continuous curve), SC^1 from near apex of cell or from near base of stalk of SC^{2-5}, free or anastomosing with C, R^1 stalked (arising after SC^1), R^2 from above middle of DC, M^1 stalked (except in *caerulea*); hindwing elongate, with termen strongly rounded, apex also rounded, tornus not pronounced, cell short. DC slightly oblique, almost straight or with DC^3 weakly incurved anteriorly, C anastomosing with cell at a point near base, very rapidly diverging (except in *caerulea*), SC^2 stalked (usually shortly), R^2 from much above middle, M^1 stalked (except in *caerulea*). ♂ genitalia with uncus parallel, bifurcate at the tip, socii long and slender, gnathos pointed, harpe full with forked clasper, penis spatulate. (Akin to those of *Comostola*.)

Early stages unknown.

From Section II of *Comostola*, which it closely resembles in shape, this genus differs in the simple discocellulars; from *Comostolopsis* it is distinguished by its shape and by the fact that SC^1 arises before R^1, whereas in *Comostolopsis* the reverse is the case.

Type of the genus : *Pyrrhorachis pyrrhogona* (Walker) = *Eucrostis pyrrhogona*, Walker = *Pyrrhorachis cornuta*, Warren.

Geographical distribution of species. — India to Australia.

SECTION I. — Hindwing with C anastomosing at a point; both wings with M^1 stalked.

1. *P. pyrrhogona* (Walker). — India to E. Australia.
   Eucrostis pyrrhogona, Walker. List Lep. Ins. Brit. Mus. Vol. 35, p. 1610 (1866).
   Iodis marginata, Lucas. Proc. Linn. Soc. N. S. Wales (2), Vol. 3, p. 1267 (1888).
   Comostola pyrrhogona, Meyrick, Trans. Ent. Soc. Lond. p. 491 (1889) (var.? — ead. ac *cornuta*, Warren) 1).
   Euchloris pyrrhogona, Hampson. Fauna Ind. Moths, Vol. 3, p. 500 (1895).
   Eucrostes pyrrhogona, Hampson, ibidem, Vol. 4, p. 566 (1896).
   Pyrrhorachis pyrrhogona, Warren, Novit. Zool. Vol. 3, p. 292 (1896).
   Pyrrhorachis cornuta, Warren, ibidem, p. 292 (1896 (var.?) 1).
2. *P. albifimbria* (Warren) (huj. gen.?). — Khâsis.
   Comostola albifimbria, Warren, Novit. Zool. Vol. 3, p. 105 (1896).
3. *P. deliciosa* (Warren). — Natuna Islands.
   Comostolodes deliciosa, Warren, Novit. Zool. Vol. 3, p. 365 (1896).
4. *P. viridula*, Warren. — British New Guinea.
   Pyrrhorachis viridula, Warren, Novit. Zool. Vol. 10, p. 363 (1903).
5. *P. castaneata* (Warren). — British New Guinea.
   Comostolodes castaneata, Warren, Novit. Zool. Vol. 13, p. 87 (1906).
6. *P. ruficeps*, Warren. — British New Guinea.
   Pyrrhorachis ruficeps, Warren, Novit. Zool. Vol. 13, p. 89 (1906).
7. *P. rubripunctata* (Warren) (huj. gen.?). — Japan.
   Microloxia rubripunctata, Warren, Novit. Zool. Vol. 16, p. 125 (1909).

SECTION II. — Hindwing with C approximated for some distance; both wings with DC^3 oblique, M^1 separate (vix huj gen.).

8. *P. caerulea* (Warren). — N. India.
   Comostola caerulea, Warren, Proc. Zool. Soc. Lond. p. 354, t. 31, f. 1 (1893).

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1) We are not able to appreciate any constant differences between the New Guinea specimens (*cornuta*, Warren = *pyrrhogona*, Meyrick) and the Indian, those pointed out by Warren being inconstant. Probably Warren's name should be treated as strictly a synonym, or at best an aberration.

193. Genus CHLOËRES, Turner

Chloëres Turner, Proc. Linn. Soc. N. S. Wales, Vol. 35, p. 570 (1910).

Characters. — Face smooth. Palpus slender, in ♂ rather short or moderate, in ♀ longer, second joint smooth, third joint distinct, in ♂ rather short, in ♀ rather long. Tongue present. Antenna in ♂ bipectinate with rather long branches, apical end simple; in ♀ nearly simple, pubescent. Pectus slightly hairy. Femora glabrous. Hindtibia in ♂ sometimes dilated, in both sexes with all spurs. Abdomen not crested. Forewing with costa scarcely arched apex acute, termen straight, oblique, tornus well pronounced; cell less than one-half, DC^3 inbent, SC^1 from near apex of cell, free, SC^2 normal, R^1 very short-stalked, R^2 from above middle of DC, M^1 very short-stalked or connate; hindwing with apex squared, termen smooth, little convex, tornus well pronounced, cell rather short, DC^3 usually incurved anteriorly, oblique posteriorly, C anastomosing with cell at a point near base, then moderately diverging, SC^2 stalked, R^2 from much above middle of DC, M^1 stalked or connate.

Larva. — Elongate, flattened, green with lighter green and darker green linear stripes laterally. On *Duboisia myoporoides* (Lucas, *Proc. Linn. Soc. N. S. Wales* (2), Vol. 4, p. 603).

Pupa. — Undescribed, in a very light cocoon among leaves (Lucas, loc. cit.).

Type of the genus : *Chloëres citrolimbaria* (Guenée) = *Chlorochroma citrolimbaria*, Guenée (1910).

Geographical distribution of species. — Australia, Borneo, ?Sumatra.

1. *C. citrolimbaria* (Guenée). — E. Australia.
   Chlorochroma citrolimbaria, Guenée, Spec. Gen. Lep. Vol. 9, p. 366 (1858).
   Chlorochroma inchoata, Walker, List Lep. Ins. Brit. Mus. Vol. 22, p. 563 (1861).
   Iodis citrolimbaria, Meyrick, Proc. Linn. Soc. N. S. Wales (2), Vol. 2, p. 879 (1888).
   Iodis inchoata, Meyrick, ibidem, p. 881 (1888).
   Iodis illidgei, Lucas, ibidem, Vol. 4, p. 603 (1890).
   Euchloris citrolimbaria, Lower, ibidem, Vol. 22, p. 29 (1898).
   Chloëres citrolimbaria, Turner, ibidem, Vol. 35, p. 571 (1910).
2. *C. dyakaria* (Walker). — Borneo.
   Eucrostis dyakaria, Walker, List Lep. Ins. Brit. Mus. Vol. 22, p. 567 (1861).
   Comostola dyakaria, Swinhoe, Lep. Het. Oxford Mus. Vol. 2, p. 366 (1900).
3. *C. dulcinata* (Fuchs) (huj. gen. ?) — Sumatra.
   Phorodesma (*Euchloris*) *dulcinata*, Fuchs, Jahrb. Nassau. Ver. Nat. Vol. 55, p. 85 (1902).
4. *C. cissina*, Turner. — Queensland.
   Chloëres cissina, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 35, p. 572 (1910).

194. Genus NEOTHELA, Turner

Neothela. Turner, Proc. Linn. Soc. N. S. Wales. Vol. 35, p. 569 (1910).

Characters. — Head smooth. Palpus slender, porrect, third joint in ♂ minute. Tongue present. Antenna in ♂ bipectinate with long branches, apices simple. Pectus slightly hairy. Hindtibia in ♂ strongly dilated, with hair-pencil, in both sexes with all spurs. Abdomen not crested. Forewing with costa arched, apex round-pointed, termen oblique, nearly straight, SC^1 from cell, anastomosing with C and SC^2, R^1 separate, M^1 widely separate; hindwing with termen bowed on R^3, DC^3 incurved, becoming very strongly oblique, C closely approximated to cell near base, thence diverging, SC^2 stalked, M^1 widely separate.

Early stages unknown.

This genus is only known to us from Turner's description. Distinguished by the wide separation of M^1 of both wings.

Type of the genus : *Neothela cissochroa*, Turner (1910).

Geographical distribution of species. — N. Queensland.

1. *N. cissochroa*, Turner. — N. Queensland.
Neothela cissochroa, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 35, p. 570 (1910).

195. Genus CYMATOPLEX, Turner

Cymatoplex, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 35, p. 576 (1910).

Characters. — Face smooth. Palpus short, slender, terminal joint short in both sexes. Tongue present. Antenna rather short, in ♂ bipectinate with very long branches, which decrease with great suddenness, apical end nearly simple; in ♀ thick, slightly serrate. Pectus slightly hairy. Femora glabrous. Hindtibia in both sexes with terminal spurs only. Abdomen not crested. Forewing with costa nearly straight, apex moderate, termen oblique, somewhat curved, cell nearly one-half, DC^3 incurved, SC^1 from cell, free, or anastomosing with C, SC^2 normal, R^1 connate, stalked or approximated, M^1 separate or connate; hindwing with termen rounded, tornus moderate, inner margin not elongate, cell not quite one-half, DC^3 incurved, C appressed to (or anastomosing with?) cell at a point near base, rapidly diverging, SC^2 stalked, M^1 separate or connate.

Early stages unknown.

Probably, as Turner suggests, more nearly a derivative of *Microloxia* than of *Chloëres*. It could easily be treated as a fourth subgenus of *Mixocera*, the principal distinction being antennal.

Type of the genus : *Cymatoplex halcyone* (Meyrick) = *Eucrostis halcyone*, Meyrick = *Cymatoplex crenulata*, Turner (1910).

Geographical distribution of species. — New Guinea to Australia.

1. *C. halcyone* (Meyrick). — British New Guinea, N. W. to E. Australia.
Eucrostis halcyone, Meyrick, Trans. Ent. Soc. Lond. p. 489 (1889).
Iodis crenulata, Lucas, Proc. Linn. Soc. N. S. Wales (2), Vol. 6, p. 294 (1891) (nov. syn.).
Euchloris dichroa, Lower, Proc. Roy. Soc. S. Austral. Vol. 27, p. 217 (1903).
Chlorochroma imparicornis, Warren, Novit. Zool. Vol. 12, p. 422 (1905).
Cymatoplex crenulata, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 35, p. 577 (1910).

2. *C. hypolichna*, Turner. — N. Australia.
Cymatoplex hypolichna, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 35, p. 578 (1910).

196. Genus CENOCHLORA, Warren

Cenochlora, Warren, Novit. Zool. Vol. 5, p. 12 (1898).

Characters. — Face smooth. Palpus minute, slender (less than one-half diameter of eye). Tongue absent. Antenna in both sexes bipectinate to about four-fifths with long branches. Pectus scarcely hairy. Femora glabrous. Hindtibia in both sexes with terminal spurs only. Abdomen not crested. Fore-

wing with costa somewhat arched, apex moderate, termen smooth, obliquely curved, cell one-half, DC^3 incurved, becoming oblique, SC^1 from cell, anastomosing at a point with C, well removed from SC^2, SC^2 normal, R^1 well separate, M^1 well separate; hindwing with termen rounded, very slightly prominent in middle, but with no distinct bend or angle, cell one-half, DC^3 curved, becoming rather strongly oblique, C bent near base, anastomosing at a point with cell, then strongly divergent, SC^2 connate or short-stalked, M^1 widely separate.

Early stages unknown.

A very specialized development of *Cymatoplex*.

Type of the genus : *Cenochlora quieta* (Lucas) = *Iodis quieta*, Lucas = *Cenochlora felix*, Warren (1898).

Geographical distribution of species. — Queensland.

1. *C. quieta* (Lucas). Queensland.
   Iodis quieta, Lucas, Proc. Roy. Soc. Queensl. Vol. 8, p. 79 (1892).
   Cenochlora felix, Warren, Novit. Zool. Vol. 5, p. 12 (1898).
   Chlorochroma quieta, Warren, ibidem, Vol. 12, p. 422 (1905).
   Cenochlora quieta, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 35, p. 574 (1910).
2. *C. quantilla*, Turner. N. Queensland.
   Cenochlora quantilla, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 35, p. 575 (1910).

197. Genus MIXOCERA, Warren

Mixocera. Warren, Novit. Zool. Vol. 8, p. 206 (1901) 1).
Gynandria. Turner, Proc. Linn. Soc. N. S. Wales, Vol. 35, p. 575 (1910).

Characters. — Face smooth. Palpus in both sexes short, second joint shortly rough-scaled, third joint minute. Tongue weak. Antenna shortly bipectinate to nearly simple, ciliated, varying in both sexes. Pectus slightly hairy. Femora glabrous. Hindtibia in both sexes with terminal spurs only. Abdomen not crested. Forewing with costa slightly arched or nearly straight, apex moderate or rather sharp, termen smooth, oblique, gently curved or nearly straight, cell about one-half, DC^3 more or less curved, SC^1 from near apex of cell, or from base of stalk of SC^{2-5}, free, or anastomosing with or running into C, SC^2 normal, sometimes anastomosing with SC^1, R^1 stalked, M^1 connate, closely approximated or very shortly stalked; hindwing with apex rounded, termen moderately to rather strongly rounded, tornus moderate, cell less than one-half, DC oblique, at least posteriorly, C shortly appressed to or anastomosing with cell near base, then diverging, SC^2 stalked, M^1 short-stalked, occasionally connate.

Early stages unknown.

Probably related to *Microlovia*, but differing in the loss of the frenulum and in the short palpus. Except in the antennal structure, there is little variation of moment, and even the facies of the species is in general very uniform. Africa furnishes most of the species, and as the material which we have seen

1) Warren cites, as type of *Mixocera*, « *indecretata*, Walker », but we have positive information from Mr. Warren himself that he misidentified Walker's species — as is also shown by the characters which he assigns to it. We therefore suppose we are justified in explaining the type of the genus to be *parvulata*, Walker = *indecretata*, Warren, and so in employing it in the sense intended by its author. At the same time we would urge the great importance of selecting as genotypes correctly-determined species, and of course the ones from which the author is actually describing. It is of course preferable to make the characterization from the actual name-type of the species, but where this cannot be done, and any shadow of uncertainty of determination exists, the expedient which we have adopted under *Chlorosterrha* should be resorted to, of giving the genotype an alternative name.

consists largely of isolated specimens from scattered localities we have been unable to obtain much insight into the limits of the species, range of geographical or of individual variation, and the like questions.

Type of the genus : *Mixocera parvulata* (Walker) = *Nemoria* (?) *parvulata*, Walker = *Mixocera indecretata*, Warren (nec Walker) (1901).

Geographical distribution of species. — S. India, Africa, N. to E. Australia.

SUBGENUS I. — Antenna in ♂ dentate or subpectinate, with fascicles of cilia (*Mixocera*, Warren) (**Pl. 5, Fig. 18**).

1. *M. parvulata* (Walker). — Bombay to Ceylon, S. Africa

Nemoria (?) *parvulata*, Walker, List Lep. Ins. Brit. Mus. Vol. 26, p. 1559 (1862).

Euchloris rectifasciata, Hampson, Fauna Ind. Moths, Vol. 4, p. 566 (1896) (nov. syn.).

Mixocera indecretata, Warren, Novit. Zool. Vol. 8, p. 206 (1901) nec Walker.

2. *M. frustratoria* (Wallengren). — S. Africa.

Eucrostis frustratoria, Wallengren, Wien. Ent. Monatschr. Vol. 7, p. 150 (1863).

Eucrostis frustatoria, Walker, List Lep. Ins. Brit. Mus. Vol. 35, p. 1610 (1866).

? *Euchloris oleagina*, Warren, Novit. Zool. Vol. 4, p. 38 (1896) (nov. syn.) 1).

? *Microloxia* (? *serraticornis*, Warren, ibidem, p. 42 (1897).

? *Mixocera serraticornis*, Warren, ibidem, Vol. 8, p. 206 (1901).

3. *M. albistrigata* (Pagenstecher). — Tropical Africa.

Eucrostis albistrigata, Pagenstecher, Jahrb. Hamburg. Anst. Vol. 10, p. 252 (1893).

Mixocera albimargo, Warren, Novit. Zool. Vol. 8, p. 206 (1901) (nov. syn.) 2).

SUBGENUS II. — Antenna in both sexes shortly pectinate (*Gynandria*, Turner).

4. *M. latilineata* (Walker). — N. to S. E. Australia.

Geometra latilineata, Walker, List Lep. Ins. Brit. Mus. Vol. 35, p. 1605 (1866).

Eucrostis latilineata, Meyrick, Proc. Linn. Soc. N. S. Wales (2), Vol. 2, p. 868 (1888).

Mixocera latilineata, Warren, Novit. Zool. Vol. 8, p. 206 (1901).

Gynandria latilineata, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 35, p. 576 (1910).

SUBGENUS III. — Antenna in ♂ simply ciliated, in ♀ very minutely ciliated (*Thelycera*, *nov.*, Prout; type : *Mixocera hemithales*, Prout).

5. **M. hemithales, nov. sp.** 3), Prout. — British E. Africa.

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1) We have not seen Wallengren's type, but the synonymy seems fairly safe. In any case *serraticornis* is clearly the same as *oleagina*.

2) Pagenstecher merely gives the ♂ antenna of his *albistrigata* as « ciliated », but his whole description fits the subgenus *Mixocera* so perfectly that it can hardly possibly be referred to a *Thelycera* unknown to us — especially as it occurs in such widely separated localities as Portuguese East Africa and Angola — and we consider the synonymy here given to be practically quite certain. It is, indeed, not absolutely inconceivable that all the three *Mixocera* here registered are but forms of one protean species.

1) **Mixocera (Thelycera) hemithales, nov. sp.** — ♂, 23 mm. Face, palpus, upper part of foreleg, antennal shaft above and postorbital rim brown-red, head otherwise pale green (tinged with ochreous —? discoloured). Thorax pale green above, whitish beneath; abdomen whitish. Forewing pale yellow green, costa narrowly whitish ochreous; a straight, thick whitish line from costa at 1 1/2 mm. from apex to inner margin at about 3 mm. from tornus, no other markings; fringe whitish. Hindwing white, unmarked. Underside of forewing greenish white, of hindwing clearer white. Fort Hall, Kenya District, British East Africa, about 4000 feet, 2 November, 1902 (S. L. and H. Hinde). Type in coll. Oxford Mus., presented by the captors. The specimen is slightly faded, and it is likely that an absolutely fresh specimen would more nearly approach the coloration of the following species. A ♀ from Salisbury, Mashonaland, February, 1900 (G. A. K. Marshall) and a smaller ♀ from Bulawayo, 21 November, 1902 (F. Eyles), both in coll. Brit. Mus., may likely belong to the present species.

6. **M. xanthostephana, nov. sp.** 1), Prout. Transvaal.
7. **M. viridans, nov. sp.** 2), Prout. Mashonaland, Natal

198. Genus EUCROSTES, Hübner

Eucrostes. Hübner, Verz. bek. Schmett. p. 283 (1826?).

Eucrostis. Lederer, Verh. Zool.-bot. Ver. Wien, Vol. 3, p. 172 (1853).

Euchrostes. Gumppenberg, Nova Acta Acad. Leop. d. Naturf. Halle, Vol. 64, p. 483 (1895).

Characters. — Face smooth. Palpus moderate, second joint somewhat rough-scaled, third joint in ♂ short, in ♀ moderate to long. Tongue developed, though rather slender. Antenna short, in both sexes bipectinate to about two-thirds, in ♂ with long, in ♀ with short branches, apex merely serrate; in ♀ sometimes subserrate throughout. Pectus slightly hairy. Femora glabrous. Hindtibia in both sexes with terminal spurs only. Abdomen not crested. Forewing rather broad 3), costa little arched, apex moderate, termen smooth, slightly curved, cell nearly one-half, DC incurved, SC^1 from cell, anastomosing with, or oftener running into C, SC^2 normal, well separate from C, R^1 connate or approximated, R^2 from above middle, M^1 connate or short-stalked; hindwing with apex somewhat rounded, termen strongly rounded, inner margin rather long, cell rather short, DC^3 somewhat incurved, C anastomosing with cell at a point near base, then rapidly diverging, SC^5 stalked or connate, R^1 very characteristic, M^1 stalked, M^2 from near end of cell. ♂ genitalia: uncus pointed, with socii of equal length, gnathos strong, pointed, harpe rounded, with small serrated fold on the sacculus, penis pestillate. Somewhat resembling those of the *Hemithea*-group, but this hardly indicates a really near relationship.

Egg. — Flattened, canary yellow — scarcely described.

Larva. — Moderately long, somewhat attenuated anteriorly, segmentation distinct. Head rather small, slightly bilobed, the lobes rounded, prothorax and metathorax strongly keeled, prothorax with four small dorsal protuberances, first to fifth abdominal segments and eighth abdominal each with a single pyramidal one, spiracles small, rounded (Millière, *Ann. Soc. Linn. Lyon* (n. s.), Vol. 15, p. 208, t. 82, f. 8, 9; *Nat. Sicil.* Vol. 3, p. 33).

Pupa. — Rather obtuse, smooth, green, in slight web among the foodplant, *Euphorbia* (Millière, loc. cit.).

1) **Mixocera (Thelycera) xanthostephana, nov. sp.** ♂, 30 mm. Face and palpus red, the latter shorter than diameter of eye. Antenna ochreous, spotted with red above. Head bright yellow ochre, marked with red behind eye and below. Thorax above green, narrowly ochreous in front. Legs mostly reddish, hind- and part of mid-femur pale. Abdomen whitish. Forewing with costa slightly arched, termen slightly more oblique than in most of the species; delicate blue-green, costa narrowly pale ochreous, an oblique ochreous whitish line from inner margin at beyond two-thirds, running towards apex, terminating at R^1 (in the type) or at SC^4 (co-type); fringe green proximally, white distally. Hindwing white, terminal one-fourth shaded with pale green, fringe pale green proximally, white distally. Underside of forewing slightly paler, the whitish line present: of hindwing more uniformly greenish-tinged. Barberton, Transvaal, 10 December, 1910 (type) and 31 December, 1910 (co-type), collected by Mr. A. J. T. Janse, the former in his collection, the latter in coll. L. B. Prout, kindly presented by the captor. Distinguished from the preceding species, apart from larger size and brighter coloration, by the more oblique course of the postmedian line, which, moreover, is more slender. A ♂ from Mulema, Uganda, May, 1903 (W. L. Doggett) in coll. Brit. Mus., appears to be referable to *xanthostephana*, though faded, and has the line still more slender. We have seen other specimens from scattered localities, in more or less imperfect condition, which certainly belong to this section, but it would be premature to decide whether we have to deal with a number of very close allies or one or two variable species. In any case the details of venation will not assist determination, for in the type of *xanthostephana* SC^1 of forewing anastomoses with C and M^1 is connate with R^2, while in the co-type SC^1 is free and M^1 just separate, and we have observed similar variations in other pairs of examples which are equally certainly conspecific. The Uganda ♂ agrees in venation with the co-type.

2) **Mixocera (Thelycera) viridans, nov. sp.** ♂ ♀, 20-21 mm. Face and palpus deep red, palpus in ♂ shorter than, in ♀ about as long as diameter of eye. Head and front of thorax ochreous. Thorax and abdomen green above, the latter paling off to whitish anally. Fore- and middle-legs red, on outer side whitish; hindleg mostly whitish, the femur marked with red, the spurs ferruginous, a slight pencil and process: tarsus short. Forewing strongly blue-green, with costa (to SC) pale ochreous; a moderately broad, slightly oblique pale ochreous line from beneath costa near apex to inner margin at about three-fourths. Hindwing concolorous, with a similar line, which runs almost straight from costa near apex to inner margin at about three-fourths, becoming somewhat more attenuated towards the latter. Underside the same, only slightly paler, costal area of forewing more mixed with green. Enkeldoorn District, Mashonaland (Miss L. S. Youngs), type ♂; Salisbury, Mashonaland, 27 November, 1897 (G. A. K. Marshall), discoloured ♂; Natal, a ♀ presented by Dr. A. J. Turner; all in coll. Brit. Mus. Durban, Natal (E. A. Bacot), a ♀ in coll. L. B. Prout. The type specimen has unfortunately lost both antennæ, but the Salisbury ♂ and the two ♀♀ show the structure of the subgenus *Thelycera*. In all four examples SC^1 and R^1 of the forewing arise close together either from the angle of the cell or the base of the stalk of SC^{2-5}; D^1 varies slightly in obliqueness, and M^1 from connate to very shortly stalked. The concolorous hindwing separates this species readily from the two preceding.

3) Shape of both wings quite different in *simonyi* and *ruficilia*, being narrow, hindwing not concolorous with forewing. These will perhaps form distinct genera.

Type of the genus : *Eucrostes indigenata* (De Villers) = *Phalaena Geometra indigenata*, De Villers = *Eucrostes fimbriolaria*, Hübner (1820?).

Geographical distribution of species. — S. Europe, Africa, S. India, N. Australia, W. Indies. A curiously scattered genus, but chiefly African.

1. *E. indigenata* (De Villers). — Spain and N. Africa to Syria.
   Phalaena Geometra indigenata, De Villers, Linn. Ent. Vol. 2, p. 383 (1789).
   Geometra fimbriolaria, Hubner, Samml. Eur. Schmett. Geom. t. 91, f. 468 (1818?).
   Eucrostes fimbriolaria, Hubner, Verz. bek. Schmett. p. 283 (1826?).
   Fidonia indigenaria, Treitschke, Schmett. Eur. Vol. 6 (1), p. 269 (1827).
   Hemithea indigenaria, Boisduval, Gen. et Ind. Meth. Eur. Lep. p. 181 (1840).
   Phalena virginalis, Costa, Cat. Lep. Napoli, in Dizion. Univ. Agric. p. [15], f. 1 (1840?).
   Chlorochroma indigenaria, Duponchel, Cat. Méth. Lép. Eur. p. 224 (1845).
   Eucrostis indigenata, Lederer, Verh. Zool.-bot. Ver. Wien, Vol. 3, p. 172 (1853).
   Eucrostis indigenaria, Guenee, Spec. Gén. Lép. Vol. 9, p. 367 (1858).
   Eucrostis nudilimbaria, Mabille, Bull. Soc. Ent. Fr. (5), Vol. 9, p. 155 (1879) (var. vel ab.?).
2. *E. rufociliaria*, Herrich Schäffer (huj. gen.?). — Cape.
   Eucrostis rufociliaria, Herrich-Schaffer, Samml. Aussereur. Schmett. Vol. 1, t. 61, f. 345 (1855); p. 62 (1856).
   ? *Microloxia roseata*, Warren, Novit. Zool. Vol. 12, p. 385 (nov. syn.).
3. *E. dominicaria*, Guenée. — W. Indies, Florida.
   Eucrostis dominicaria, Guenee, Spec. Gén. Lép. Vol. 9, p. 367 (1858).
   Synchlora dominicaria, Hulst, Trans. Amer. Ent. Soc. Vol. 23, p. 315 (1896).
4. *E. disparata*, Walker. — Bombay to Ceylon, ?Aden.
   Eucrostis disparata, Walker, List Lep. Ins. Brit. Mus. Vol. 22, p. 567 (1861).
   Geometra parvulata, Walker, ibidem, Vol. 26, p. 1555 (1862).
5. *E. albicornaria*, Mabille (præc. var. vel syn.?). — Madagascar, S. Africa.
   Eucrostis albicornaria, Mabille, Bull. Soc. Ent. Fr. (5), Vol. 9, p. 155 (1879); Saalmuller, Lep. Madag. (2), p. 494, t. 14, f. 273 (1891) [1]).
6. *E. beatificata* (Walker). — Sierra Leone.
   Geometra beatificata, Walker, List Lep. Ins. Brit. Mus. Vol. 26, p. 1554 (1862).
   Eucrostes beatificata, Swinhoe, Trans. Ent. Soc. Lond. p. 549 (1904).
7. *E. iocentra*, Meyrick. — Queensland.
   Eucrostis iocentra, Meyrick, Proc. Linn. Soc. N. S. Wales (2), Vol. 2, p. 868 (1888).
   Iodis barnardae, Lucas, ibidem, Vol. 6, p. 293 (1891) (nov. syn.).
   Eucrostes nanula, Warren, Novit. Zool. Vol. 4, p. 211 (1897) (nov. syn.).
8. *E. simonyi*, Rebel (huj. gen.?). — Canary Islands, ?N. Africa.
   Eucrostis simonyi, Rebel, Ann. Hofmus. Wien, Vol. 9, p. 67 (1894).
   Omphacodes divincta, Holt White, Butt. and Moths Teneriffe, p. 86, t. 4, f. 7 (1894) (nec Walker).
   Microloxia (?) *pallida*, Warren, Novit. Zool. Vol. 4, p. 390 (1897) (nov. syn.).
9. *E. rubridisca*, Warren (cad. ac *albicornaria*, Mabille?). — E. and W. Africa.
   Eucrostes rubridisca, Warren, Novit. Zool. Vol. 4, p. 38 (1897).
10. *E. rufocellata*, Mabille (huj. gen.?). — Madagascar.
    Eucrostes rufocellata, Mabille, Ann. Soc. Ent. Fr. Vol. 68, p. 741 (1900).
11. *E. innotata*, Warren (huj. gen.?) [2]). — Portuguese W. Africa.
    Eucrostes innotata, Warren, Novit. Zool. Vol. 8, p. 205 (1901).
12. **E. rhodophthalma, nov. sp.** [3]), Prout. — Cape.

1) *Acrostis albicornaria* on the legend to plate.

2) Agrees in most characters with *Eucrostes*, but M^1 of hindwing is not stalked. The hindlegs are lost. We know only the type specimen.

3) **Eucrostes rhodophthalma, nov sp** — ♀, 22 mm. Face crimson. Palpus crimson, pale beneath, third joint long. Antennal shaft whitish, pectinations short. Vertex broadly white, occiput green. Thorax and abdomen green above (damaged). Thorax beneath, and upper side of fore- and middle-legs reddish. Wings bright green, slightly more bluish than in *indigenata*, etc. Forewing with costal edge broadly white, only at extreme base green and at extreme apex narrowly marked with rosy (in continuation of the terminal line); a pale sinuous postmedian line at two-thirds faintly indicated discal spot rather large, rose-colour, narrowly surrounded with white; terminal line fine, dark, tinged with crimson; a small white, rosy-margined terminal spot between M^3 and SM^2; fringe rosy. Hindwing similar, the discal spot considerably larger, termen with a series of the white, rosy-margined spots between the veins, though all except the tornal one very small. Underside much paler, costal half of forewing flushed with red. Cape of Good Hope, probably Transkei (presented by Miss F. Barrett). Type in coll. Brit. Mus. A typical *Eucrostes* in all respects, except that the palpus is longer than usual.

13. **E. insularis, nov. sp.** 1), Prout — Sokotra.
Nemoria directa, Hampson, Nat. Hist. Sokotra, p. 333 (1903) (nec Walker).

199. Genus ALLOCHROSTES, nov. gen., Prout

Allochrostes, nov. gen., Prout.

Characters. — Face smooth. Palpus short, second joint rough-scaled beneath, third joint in both sexes quite small, in ♀ slightly longer than in ♂. Tongue slender. Antenna scarcely over one-half, in ♂ bipectinate almost to apex, with long, shortening branches, the few last being mere serrations; in ♀ similarly bipectinate, but with shorter branches. Pectus hairy. Femora slightly hairy. Hindtibia in ♂ not dilated, in both sexes with a single pair of long spurs. Abdomen with dorsal pattern, but not crested. Forewing with costa slightly arched, apex moderate, termen slightly curved, oblique, cell almost one-half, DC^3 curved, oblique posteriorly, SC^1 from cell, running into C, which is far removed from SC^{2-5}, SC^2 normal, R^1 short-stalked or separate, M^1 separate; hindwing rather long, apex and termen well rounded, cell nearly one-half, DC^3 somewhat incurved anteriorly, C anastomosing to near end of cell, SC^2 stalked, R^2 scarcely above middle, M^1 separate.

Early stages unknown.

Related to *Eucrostes*, differing in the very strong anastomosis of vein C of hindwing and several less essential characters. From *Xenochlorodes* it differs in the rough-scaled palpus, the venation, etc., as well as in the scheme of pattern.

Type of the genus : *Allochrostes saliata* (Felder) = *Racheospila saliata*, Felder.

Geographical distribution of species. — Ethiopian.

1. *A. saliata* (Felder). — Natal to E. Africa, Sierra Leone.
Racheospila saliata, Felder, Reise Novara, Lep. Het. t. 127, f. 36 (1875).
Lasiochlora saliata, Butler, Proc. Zool. Soc. Lond. p. 593 (1894).
Eucrostes impunctata, Warren, Novit. Zool. Vol. 4, p. 211 (1897) (nov. syn.).
Syndromodes rubridentata, Warren, ibidem, p. 213 (1897).
Heterorachis ? *sabiata*, Warren, ibidem, Vol. 5, p. 235 (1898).
Syndromodes sabiata, Swinhoe, Trans. Ent. Soc. Lond. p. 543 (1904).

200. Genus XENOCHLORODES, Warren

Xenochlorodes. Warren, Novit. Zool. Vol. 4, p. 47 (1897).

Characters. — Face smooth. Palpus very small, slender, second joint smooth-scaled, third joint minute. Tongue slender. Antenna in ♂ bipectinate to near apex, with long branches, apical extremity nearly simple; in ♀ serrate or subserrate. Pectus and femora glabrous. Hindtibia in both sexes with

1) **Eucrostes insularis, nov. sp.** — ♂ ♀, 12-16 mm. Face red. Palpus in ♂ very short, in ♀ with second and third joints elongate; ochreous, marked with red above and on outer side. Vertex broadly white, occiput narrowly green. Antennal shaft pure white at base, becoming ochreous-tinted; ♂ with moderate pectinations, ♀ merely subserrate. Thorax and abdomen green above, whitish beneath and at anal extremity. Wings bright green, costal edge of forewing snow-white nearly to apex, margined by a yellowish (or yellow-green) subcostal streak to apex; each wing with a very small brown red discal dot, and a very indistinct (sometimes almost obsolete) whitish postmedian line, gently outcurved distally to cell and incurved posteriorly; fringes ample, concolorous proximally, paler and with a distinct red flush distally. Underside much paler, costa of forewing broadly red, and the entire costal half (or more) of the wing more or less suffused with that colour. Jena-agahan, 1200 feet, 6 January, 1899 (type ♂) 2); Adho Dimellus, 3500 feet, 2 Februari 1899 (♀); Hadibu Plain, 11 December, 1898 (♂, 14 December, 1898 (2 ♀); all in coll. Brit. Mus. Differs from *rubridisca*, Warren, in the absence of red terminal line, and in the non-pectinate ♀ antenna. The two sexes show greater disparity in length of palpus than is usual in this genus, each being at the extreme in its own direction.

2) Recorded in the *Nat. Hist. Sokotra*, no doubt by a misprint, as ♀.

terminal spurs only. Abdomen not crested. Forewing with costa slightly arched, apex moderate, termen oblique, slightly curved, cell about one-half, DC incurved, often very deeply, SC^1 very short-stalked with SC^{2-5} (or connate, or closely approximated), anastomosing with or running into C, SC^2 normal, anastomosing with or running into SC^1 (or C), R^1 stalked, M^1 short-stalked (or in *nubigena* connate); hindwing with apex rounded, termen smooth, more or less rounded, tornus squared, cell short, DC^3 shortly inbent anteriorly, then slightly or moderately oblique, C anastomosing to near end of cell, SC^2 long-stalked, R^2 from scarcely or only quite moderately above middle of MC, M^1 short-stalked.

Larva. — Moderate, head small with two small points, retracted under prothorax, prothorax high, strongly bifid, body with lateral flange, no humps, anal flap ending in sharp point, spiracles rather prominent. On *Phillyrea* (Hofmann. *Raupen Grossschmett. Eur.* p. 160, *beryllaria*). Millière once found a larva on olive (*Icon.* Vol. 3, p. 462.)

Pupa. — Green (not described), in slight cocoon among food-plant.

Type of the genus : *Xenochlorodes olympiaria* (Herrich-Schäffer) = *Geometra olympiaria*, Herrich-Schäffer = *Xenochlorodes pallida*, Warren (1897).

Geographical distribution of species. — S. W. Palæarctic, to Syria.

1. *X. olympiaria* (Herrich-Schäffer). — Asia Minor, Syria.
   - *Geometra (Eucrostis) olympiaria*, Herrich-Schaffer, Syst. Bearb. Schmett. Europ. Vol. 3, t. 87, f. 539 (1851); p. 63 (1852).
   - *Eucrostis olympiaria*, Herrich-Schäffer, ibidem, Index. p. 21 (1855).
   - *Nemoria (?) olympiaria*, Guenée, Spec. Gén. Lép. Vol. 9, p. 350 (1858).
   - *Eucrostis olympiaria*, var. *cremonaria*, Staudinger, Iris, Vol. 10, p. 179 (1897) (ab. ?).
   - *Xenochlorodes pallida*, Warren, Novit. Zool. Vol. 4, p. 47 (1897) (nov. syn.).
2. *X. beryllaria* (Mann). — S. E. France to Syria, N. Africa.
   - *Geometra beryllaria*, Mann, Verh. Zool.-bot. Ver. Wien, Vol. 3, p. 76 (1853).
   - *Eucrostis beryllaria*, Lederer, ibidem, p. 172 (1853).
   - *Nemoria beryllaria*, Guenée, Spec. Gén. Lép. Vol. 9, p. 348 (1858).
   - *Nemoria aureliaria*, Millière, Ann. Soc. Linn. Lyon (n. s.), Vol. 15, p. 189, t. 81, f. 1-5 (1868).
3. *X. nubigena* (Wollaston). — Madeira.
   - *Hemithea nubigena*, Wollaston, Ann. Mag. Nat. Hist. (3), Vol. 1, p. 118 (1858).
   - *Nemoria nubigena*, Baker, Trans. Ent. Soc. Lond. p. 212 (1891).
   - *Microloxia nubigena*, Warren, Novit. Zool. Vol. 12, p. 441 (1905).
   - *Hemithea cricetorum*, Wollaston, MS. (in coll. Brit. Mus.).

201. Genus MIXEOPHANES, nov. gen., Prout

Mixeophanes, nov. gen. Prout.

Characters. — Face smooth. Palpus in ♀ quite short, terminal joint small (♂ unknown). Antenna in ♀ bipectinate. Hindtibia with terminal spurs only. Abdomen not crested. Forewing rather narrow, costa almost straight, termen rather strongly oblique, cell just over one-half, SC^1 from cell, running into C, SC^2 normal; hindwing rather narrow, termen smooth, rounded, angles not pronounced, cell rather long, DC nearly vertical, C anastomosing to near end of cell, SC^2 long-stalked, R^2 from about the middle of DC.

Early stages unknown.

We have drawn the above characters from notes made on a hurried examination of Warren's type. It is altogether anomalous, and cannot be placed in any existing genus. The aspect is Acidaliid,

and R^2 of the hindwing is virtually as in that subfamily, from which, however, the venation of both wings separates it radically. Unless it be a development of *Xenochlorodes*, in which also R^2 is often nearly central, but which has the normal broad wings of the *Hemithetnae*, its origin is entirely enigmatical.

Type of the genus : *Mixeophanes dissimilis* (Warren) = *Euchloris dissimilis*, Warren.

Geographical distribution of species. — Sudan.

1. *M. dissimilis* (Warren & Rothschild). — Sudan to Sinai.
   Euchloris dissimilis, Warren & Rothschild, Novit. Zool. Vol. 12, p. 26, t. 4, f. 27 (1905).
   Eucrostes desertoria, Rebel, Verh. Nat. Ver. Karlsruhe, Vol. 21, p. 137 (1909) (nov. syn.).

SPECIES INCERTÆ SEDIS

Phalaena exspectata, Fabricius, Syst. Ent. p. 636 (1775) 1). — Asia.
Phaleana monilaria, Fabricius, Gen. Ins. p. 285 (1777) (huj. subfam.?). — India.
Phalaena Geometra viridana, Stoll, in Cramer, Pap. Exot. Vol. 4, p. 126, 252, t. 355, f. G (1781) = *Leptographa* [Hübner, 1826?] *conviridaria*, Hübner, Verz. bek. Schmett. p. 284 (1826?) = *Comibaena* (?) *viridana*, Walker, List Lep. Ins. Brit. Mus. Vol. 22, p. 605 (1861) 2). — Surinam.
Leptographa scriptaria, Hübner, Verz. bek. Schmett. p. 284 (1826?) = *Phalaena Geometra viridaria*, Stoll, Suppl. Pap. Exot. Cramer, p. 146, 184 (in err. 384], t. 32, f. 5 (1790) (nec Fabricius, 1775) = *Comibaena* (?) *viridaria*, Walker, List Lep. Ins. Brit. Mus. Vol. 22, p. 605 (1861) 3). — Cape.
Geometra (*Nemoria*) *venustaria*, Herrich-Schäffer, Syst. Beatb. Schmett. Eur. Vol. 3, p. 9 (1846) 4). — Loc. ignot.
Geometra subtinctaria, Guenée, Spec. Gén. Lep. Vol. 9, p. 345 (1858) 5). — ? Australia.
Amaurinia olearia, Guenée, ibidem, p. 385 (1858) (huj. subfam.?). — Borneo.
Thalassodes strigigera, Wallengren, Wien. Ent. Monatschr. Vol. 4, p. 175 (1860) = *Hemithea strigigera*, Wallengren, Eugen. Resa, Lep. p. 379 (1861). — Sydney (Australia).
Hypochroma paratorna, Meyrick, Proc. Linn. Soc. N. S. Wales (2), Vol. 2, p. 906 (1888) 6). — S. Australia.
Thalassodes virescentaria, Maassen, Stübels Reisen, Lep. p. 160, t. 8, f. 11 (1890) 7). — Bolivia.
Phorodesma latimarginaria, Maassen, ibidem, f. 12 (1890). — Peru.
Iodis multitincta, Lucas, Proc. Linn. Soc. N. S. Wales (2), Vol. 6, p. 295 (1891). — Queensland.
Hypochroma diffundens, Lucas, ibidem, p. 298 (1891) (huj. subfam.?). — Queensland.
Hypochroma cugramma, Lower, Trans. Roy. Soc. S. Austral. Vol. 15, p. 14 (1892) (huj. subfam.?). — S. Australia.
Iodis nitida, Lucas, Proc. Linn. Soc. N. S. Wales (2), Vol. 7, p. 252 (1892). — Queensland.
Nemoria chlorinaria, Mabille, Ann. Soc. Ent. Fr. Vol. 66, p. 230 (1897). — Madagascar.
Nemoria viridellaria, Mabille, ibidem, p. 231 (1897). — Mauritius.

1) Referred to *Eucrostes indigenata* by Treitschke (impossible on account of « seticornis ») to *Thocnemis cassidara* with query by Guenée; may be a ♀ *Comibaena* or *Pyrrhorachis*.
2) Possibly a *Rach ospila* (*Blechroma*) or a *Dryidopsis*; might even be a crude figure of *D. pulveraria* (Schaus).
3) We select this as the type of the genus *Leptographa*, Hübner, contingent on the rediscovery of the species, which appears quite recognizably figured.
4) Possibly a *Racheospila*.
5) M. P. Thierry-Mieg has seen Guenée's type, and kindly sent us some notes, but does not recognize the species, which he compares to an *Iodis*, sens. lat. (? *Chlorocoma* or *Eulaxia*); the hindwing is *not* white, but body and wings are badly discoloured by moisture.
6) See our note under *Stericta psis inconsequens*, supra, p. 24.
7) The figure somewhat suggests the build of *Anomphax*.

Nemoria aequaria, Mabille, Ann. Soc. Ent. Fr. Vol. 66, p. 231 (1897).	Comoro Island and Mada-
Xenochlaena [Lower, 1903] *porphyropa* (Lower) = *Arrhodia porphyropa*, Lower, Proc. Linn. Soc. N. S. Wales, Vol. 23, p. 42 (1898) = *Xenochlaena porphyropis*, Lower, Trans. Roy. Soc. S. Austral. Vol. 27, p. 192 (1903) (huj. subfam.?).	New South Wales. | gascar.
Hypochroma conspurcata, Lucas, Proc. Roy. Soc. Queensl. Vol. 13, p. 68 (1898).	Queensland.
Hydata (?) *dubia*, Warren, Novit. Zool. Vol. 6, p. 24 (1899) 1).	Niger Coast.
Leucoglyphica (?) *fasciata*, Warren, ibidem, p. 25 (1899) 2).	Niger Coast.
Phorodesma hemistrigata, Mabille, Ann. Soc. Ent. Fr. Vol. 68, p. 740 (1900).	Madagascar.
Hemithea dentata, Mabille, ibidem, p. 740 (1900) 3).	? Madagascar.
Eucrostis lilliputaria, Mabille, ibidem, p. 741 (1900).	Madagascar.
Melochlora papuensis, Warren, Novit. Zool. Vol. 14, p. 134 (1907).	British New Guinea.
Tachyphyle convergens, Warren, ibidem, p. 136 (1907) 4).	British New Guinea.

Note. — *Phyle* (?) *banakaria*, Plötz, *Stett. Ent. Zeit.* Vol. 41, p. 302 (1880), from W. Africa, is referred by Swinhoe (*Trans. Ent. Soc. Lond.* 1904, p. 586) to the *Hemitheinae*, but is clearly the same species as *Omiza tortuosa*, Warren, *Novit. Zool.* Vol. 4, p. 258; some other species entered under the *Hemitheinae* by Swinhoe in the same place have certainly no connection therewith — *Chrysocraspeda*, *Chrysolene* (two species) and *Gynopteryx rubedinaria* (Mabille, *Ann. Soc. Ent. Fr.* 1890, not « Moesch., loc. cit. »). *Hylophila buddhae*, Alphéraky, *Roman. Mém. Lép.* Vol. 9, p. 132, t. 9, f. 8 (1897), from Szechuan, has much more the aspect of a Hemitheine than of a *Hylophila*, but is entirely unknown to us.

The following genera also do not belong to the *Hemitheinae* :

Dithecodes, Warren, Novit. Zool. Vol. 7, p. 102. Belongs to the *Acidaliinae*.
Neonemoria, Warren, ibidem, Vol. 11, p. 23. Belongs to the *Acidaliinae*.
Prasinoscia, Warren, ibidem, Vol. 12, p. 318. Belongs to the *Larentiinae* (section *Astheninae* of Warren).

* * *

In conclusion we have to thank the many who have with information, advice, the loan of specimens, or in any other way assisted us in the arduous work of this revision. Almost all those entomologists whose valued help we acknowledged in our revision of the *Œnochrominae* have placed us under still further obligations by their continued coöperation; while many others, notably Herr Rudolf Püngeler, MM. Charles Oberthür and P. Thierry-Mieg, Messrs. Richard F. Pearsall, John A. Grossbeck and F. N. Pierce, have come forward with assistance which we could ill have dispensed with. To the last-named in particular, with the Rev. C. R. N. Burrows, we are very deeply indebted for their laborious investigations of many of the genitalia, undertaken at very short notice and at considerable personal inconvenience. The free use which we have made of the masterly work of Dr. A. J. Turner has already been acknowledged above.

1) We have seen Warren's type (a ♀), but failed to refer it to any known genus; probably it is nov. gen. In the forewing SC^4 is from cell, anastomosing strongly with C, SC^2 from stalk of SC^{3+5}, anastomosing strongly with SC^1, from a point with C; hindwing with C anastomosing at a point with cell; all spurs present; see also Warren's notes. Perhaps related to the *Diplodesma*-group, or to *Lambornia*.

2) This specimen (♀) also we have seen, but not closely studied. See Warren's notes on structure.

3) Perhaps near to *Gelasma* (?) *cowani*, Butler, or — as Mabille says — to *Heterocrita* (?) *cinctuta*, Saalmüller.

4) Of this and the preceding species we have also seen Warren's types only, and have not been able to arrive at a satisfactory decision as to their probable affinities. The former (*papuensis*) is perhaps a *Gelasma*, but with the frenulum tending towards obsolescence; it looks near *subangulata*, Warren. *Tachyphyle convergens* will probably prove to form a new genus, distinguished from *Prasinocyma* not only by its shape, but by having the cells of both wings very short — that of hindwing not quite one-third.

ADDENDA ET CORRIGENDA

During the progress of the work through the press, a few small errors and omissions have been discovered which it is desirable to rectify. There are also one species and two or three synonyms to add which had by accident been dropped out of our MS., and some recently described or recently discovered species to enter, in order to bring the work up to date.

Page 13 : *Pingasa*. The larva and pupa of *P. dispensata*, Walker, were figured by Forsayeth from Mhow, *Trans. Ent. Soc. Lond.* 1884, p. 416, t. 14, f. 12, 12*a*, and show the larva of *Pingasa* to be much more closely related to *Pseudoterpna* than we had gathered from the other (less satisfactory) figures. It has quite the outline, pose and even coloration of *P. pruinata*, and the head « bifid when viewed from above and behind ». Feeds on *Zizyphus jujuba*. Pupa brown, with darker wing-cases.

Page 32, insert :

16*a*. *P. sapungkanana* (Strand) (prae. var.?). Sumatra, Borneo, Singapore, ?India.
Pseudoterpna sapungkanana, Strand, Iris, Vol. 23, p. 204 (1910).

Page 38 : *Terpna* (*Hypobapta*). The larva and pupa of *percomptaria* are described by Rambow, *Rec. Austral. Mus.* Vol. 3 (4), p. 81, t. 18, f. 1-1*d*. The larva feeds on *Eucalyptus piperita* and resembles a folded leaf. It is sage-green, thickened in middle, tapering equally to head and anus, the two extremities looking very much alike; head curiously elongate, bifid, anal extremity elongate, chitinous, bifurcate. Pupa of the normal form, attached by the anal extremity and by a central girth, as in the genera of the *Cosymbia* (= *Zonosoma*) group (subfam. *Acidaliinae*). We know of no near relative of this larva, but believe we have heard that that of *Crypsiphona ocultaria* shows direct affinity with it. The pupal habit, if not an accident in the individual observed, is extremely remarkable.

Page 47 :

1. *P. pruinata* (Hufnagel). Add to the synonymy :
Aspilates atropunctaria, Walker, List Lep. Ins. Brit. Mus. Vol. 26, p. 1673 (1862) 1).
[*Pseudoterpna*] *renotata*, Walker, MS., in coll. Oxford Mus.

Page 47, insert :

1*a*. *P. simplex*, Alphéraky (bon. sp. certo). N. W. China.
Pseudoterpna pruinata var. *simplex*, Alphéraky, Roman. Mem. Lep. Vol. 6, p. 54 (1892).

Page 51, insert :

9*a*. *D. translucida* (Montrouzier). Woodlark Island.
Hazis translucida, Montrouzier, Ann. Soc. Agric. Lyon (2), Vol. 8, p. 400 (1856).

Page 65, insert :

4. *C. taiwana* (Wileman) 2). Formosa.
Episopthalma taiwana, Wileman, The Entomologist, Vol. 44, p. 267 (1911).

Page 75 : *Dioscore*. We have recently seen a ♀, belonging to *fulgurata*, *homoeotes*, or a close ally. ♀ palpus with third joint elongate, antenna not pectinate, frenulum not discoverable. It is possible that,

1 The locality given (East Florida) is certainly erroneous. The type specimen, though rather small and worn, is perfectly recognizable, and not only the genus, but even the entire group to which it belongs is wanting in the New World.

2) Must form a new section of *Chlorodontopera* : ♂ antenna simple. By our Key it would fall into *Dooabia*, as we dichotomized (for simplicity, as was at the time believed) by the ♂ antenna; but is in every detail a *Chlorodontopera*. As now understood, *Chlorodontopera* can be separated from all allies by the *strongly* and irregularly dentate termen of both wings, with *strong* excision between R^1 and R^3 of hindwing; from most also by the less elongate third joint of ♀ palpus, exceptionally strong ♀ frenulum and double anastomosis of SC^1 of the forewing. With this genus eliminated our Key will still hold.

notwithstanding the very strong ♂ frenulum, we have placed this genus somewhat too far back in the evolutionary scale, and that it may be nearer the stage of development of the *Chrysochloroma-Thalassodes* group than of *Hipparchus*.

Page 75, insert :

6. *D. puntifimbria* (Warren). British and Dutch New Guinea.
Hemistola (?) *punctifimbria*, Warren, Novit. Zool. Vol. 10, p. 358 (1903).

Page 81 : 28. *A. batis* (Warren). According to the venation this should apparently be transferred to the genus *Oxychora;* the ♀ frenulum and some other characters still require investigation. Possibly some others of the species which have been referred to the genus *Anisozyga* will need reconsidering.

Page 84, insert :

1*a*. *C. infracta* (Wileman). Japan.
Thalassodes infracta, Wileman, Trans. Ent. Soc. Lond. p. 342, t. 30, f. 16 (1911).

Page 100 :

20. *C. diluta* (Warren). Add to te synonymy :
Thalera ingrata, Wileman, Trans. Ent. Soc. Lond. p. 343 (1911) (nov. syn.).

Page 107, insert :

54*a*. *R. modesta*, (Dognin). Mexico.
Miantonota modesta, Dognin, Hét. Nouv. Amér. Sud (3), p. 22 (1911).

Page 108, insert :

72*a*. *R. nigripes* (Dognin) 1). Colombia.
Prasinocyma (?) *nigripes*, Dognin, Hét. Nouv. Amér. Sud (3), p. 23 (1911).

Page 110, insert :

102*a*. *R. magnaria*, Bastelberger. Mexico.
Racheospila magnaria, Bastelberger, Intern. Ent. Zeit. Guben, Vol. 5, p. 148 (1911).

Page 124, insert :

29. *P. nigromarginata*, Dognin. Colombia.
Phrudocentra (?) *nigromarginata*, Dognin, Hét. Nouv. Amér. Sud (4), p. 6 (1911).

Page 127 :

1. *D. iridaria* (Guenée). Add to the synonymy :
? *Phalaena Geometra albolinearia*, Martyn (MS.). Psyche, t. 28, f. 80 (1797).

Page 131, insert :

16. *A. imula* (Dognin). French Guiana.
Racheolopha imula, Dognin, Hét Nouv. Amer. Sud (3), p. 23 (1911).

Page 158 :

40. *P.* (?) *absimilis* (Warren). Is perhaps a small *Dioscore*.

Page 158 :

40. *P.* (?) *punctifimbria* (Warren). Belongs to the genus *Dioscore*, see supra.

Page 158 : 53. *P. mistifimbria*, Prout. Delete the proposed new name, which is unnecessary. The last-mentioned *punctifimbria* (n° 46) proving to be a *Dioscore*, the present species can stand as *Prasinocyma punctifimbria* (Warren).

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1) The structure, according to a specimen kindly lent us by M. Dognin, agrees entirely with that of *venilineata*, and strengthens our suspicion (p. 103) that this group will prove susceptible of generic separation

Page 159, insert :

72. **P.** (?) **cæruleotincta, nov. sp.** 1), Prout. — New Guinea.

Page 161, insert :

3. *O.* (?) *batis* (Warren). — British New Guinea.
Anisogamia batis, Warren, Novit. Zool. Vol. 13, p. 78 (1906).

Page 174, insert :

12*a*. *C. plana* (Wileman). — Japan.
Nemoria plana, Wileman, Trans. Ent. Soc. Lond. p. 340 (1911).

Page 182 : 4. *N. atridisca* (Warren). Must be transferred to *Lophostola*, see infra.

Page 185, insert :

5*a*. *D. eluta* (Wileman). — Japan.
Hemithea eluta, Wileman, Trans. Ent. Soc. Lond. p. 337 (1911).

Page 195, insert :

6*a*. **O. shorti, nov. sp.** 2), Prout. — S. Rhodesia.

Page 201, insert :

8*a*. *M. rhoisaria* (Chrétien) (huj. gen. ?) 3). — Algeria.
Eucrostes ?rhoisaria, Chrétien, Le Naturaliste, Vol. 31, p. 30 (1909).

Page 229 : *Lophostola*. The study of a pair of examples of « *Hemithea* » *atridisca*, Warren, which we tentatively placed (p. 182 supra) in *Nemoria*, satisfies us that it is quite nearly related to *annuligera*, Swinhoe, the type of *Lophostola*, differing little except in its rather smoother wing-margins. The well-developed abdominal crests, long ♀ palpus and absence of ♂ frenulum separate it essentially from *Nemoria*. On the strength of this generic union, we are able to confirm the placing of *Lophostola* in Group VI, and to complete our diagnosis thus : hindtibia in both sexes with terminal spurs only.

Page 229, insert :

2. *L. atridisca* (Warren). — Natal.
Hemithea atridisca, Warren, Novit. Zool. Vol. 4, p. 40 (1897).
Nemoria atridisca, Warren, ibidem, Vol. 5, p. 235 (1898).

Page 244 : 6. *M. xanthostephana*. A ♀ from Nakutu, British E. Africa, 8 May, 1911 (H. A. Badeker), recently presented to the British Museum by the African Entomological Research Committee, agrees well with the Transvaal examples of this species, although having the postmedian line slender and slightly less oblique.

1) **Prasinocyma** (?) **cæruleotincta, nov. sp.** ♂, 27 mm. Face olive-fuscous, narrowly white below. Palpus with second joint stout, third joint quite moderate; olive-brown, first joint and base of second white beneath. Vertex and base of antenna white. Body white, thorax tinged with green blue above. Forewing broad, SC^1 connate, anastomosing strongly with C, SC^2 normal, anastomosing strongly with SC^1, R^1 well separate, M^1 nearly connate; rather thinly scaled, delicate blue (nearly as in the genus *Deroxena*, but slightly more greenish), costa bright ochreous, lines consisting of large grey-black spots at costa and on veins, antemedian from about one-fourth costa, rather straight, postmedian from costa before two-thirds, strongly outcurved; cell spot large, black; some minute grey dots at termen. Hindwing elbowed at R^3, cell short, DC^2 rather oblique outwards, DC^3 incurved, C approximated to cell at little more than a point, rapidly diverging, R^2 from near R^1, M^1 rather longer-stalked than SC^2; marked like forewing, but without the first line. Underside almost concolorous with upper, unmarked. Mimika River, New Guinea, July, 1910 (A. F. R. Wollaston). Type in coll. Brit. Mus. A very distinct species.

2) **Omphax shorti, nov. sp.** — ♂, 32 mm. Face pale ochreous, reddish above. Palpus very minute, but rough-scaled, reddish, dark-marked. Vertex, antenna and front of thorax pale ochreous; thorax and first segment of abdomen dorsally green, abdomen otherwise white, with strongly developed white crests on second, third and fourth segments. Wings above bright green. Forewing with costal margin for a breadth of about 1 mm. creamy white, the extreme edge ochreous; distal margin the same, broadening into a small blotch anally and extending a little way along inner margin, traversed throughout by a thick pale ochreous line which likewise broadens anally; terminal line fine, brighter ochreous, extending along inner margin as far as does the blotch; fringe ochreous whitish. Hindwing similar, the costal margin broader and whiter, not ochreous edged, the distal broadening slightly towards apex, the extension along inner margin very narrow, but reaching nearly to base, not ochreous-edged. Underside whitish green, with all the margins whitish ochreous, not sharply defined. Selukwe, S. Rhodesia, 20-27 October, 1910 (F. W. Short). Type in coll. L. B. Prout. Not quite a typical *Omphax*, the crests being as in *Celidomphax*, while the pattern strongly recalls *Bathycolpodes acoelopa*; but the rest of the characters are typical. The antenna is thick, vein SC^1 of forewing free. We have great pleasure in dedicating this lovely species to Mr. F. W. Short, B. Sc., F. I. E., of Selukwe, to whom we owe its discovery and by whose generosity it now stands in our collection.

3) The description given would rather suggest a close ally of *Chlorissa pulmentaria* and *faustinata*. The ♂ is not known, and the ♀ tibial armature was not noted. Bred from *Rhus oxyacantha*.

Page 247 : *Mixeophanes*. We have now seen the ♂, and have been able to give more study to the characters of this interesting genus. Tongue wanting. Antenna short, in ♂ bipectinate, with rather well-separated branches, in part rather long, but shortening rapidly, apical part merely subserrate. Pectus and femora glabrous. Hindtibia in ♂ not dilated. Forewing with M^1 separate, hindwing with M^1 about connate; fringes long.

Page 248-249 : The following must be added to the list of « Species incertæ sedis » :

Hemithea squalidaria, Costa, Faun. Regn. Napoli, Lep Geom. p. 17, t. 2, f. 4 (1848) (vix huj. subfam.) 1). — Italy.

Phorodesma graminaria, Kollar, Denkschr. Akad. Wiss. Wien, Math.-Nat. Classe, Vol. 1, p. 51 (1850) [*Phoradesma* on p. 53] 2). — S. Persia.

Euchloris ochrella, Strand, Ent. Rundschau, Vol. 26, p. 108 (1909). — German E. Africa.

* * *

In order to secure priority, in the unavoidable delay between describing and publishing in the present work, preliminary diagnoses in outline were inserted in *The Entomologist's Record*, Vol. 23, p. 267, October, 1911, of the following New Guinea species and subspecies :

Agathia diversilinea ampla, Prout. *Ent. Record*, Vol. 23, p. 267; *Gen. Ins. Geom.* subfam. *Hemitheinae*, p. 59.

Anisozyga polyleucotes, Prout, ibidem; *Gen. Ins.* p. 82.

Anisozyga diazeuxis, Prout, ibidem; *Gen. Ins.* p. 83.

Gelasma atrapophanes, Prout, ibidem; *Gen. Ins.* p. 149.

Dioscore homoeotes, Prout, ibidem; *Gen. Ins.* p. 75.

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1) But for Costa's express statement that the palpus distinguishes it from *Metrocampa* (sens lat.), we should have been inclined to determine it as a form or near ally of *Ellopia prosapiaria* (Linn.).

2) Probably a *Euchloris*, allied to *smaragdaria*, with which Kollar compares it. Or account of this comparison, the size-indication, etc., it does not seem possible that this can be the « *graminaria*, Kollar, MS. » of Zeller (= *Microloxia herbaria*).

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(The names in italics are synonyms)

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— 4. *Metallochlora* (*Cosmogonia*) *decorata*, Warren, ♂ 166
— 5. *Prohydata projiciens*, Prout, ♂ 187
— 6. *Lasiochlora bicolor*, Thierry-Mieg, ♂ 203
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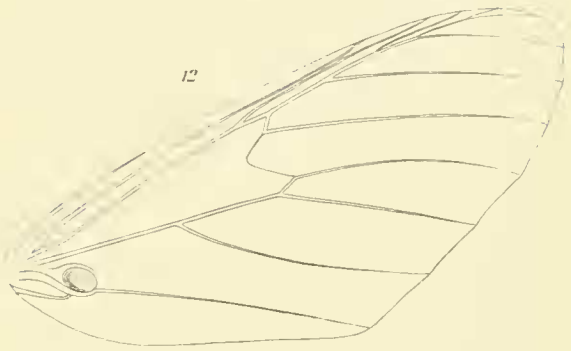
— 8. *Archichlora viridimacula*, Warren, ♀ 87
— 9. *Euloxia meandraria*, Guenée, ♂ 223

London, N. E., Dalston, 8th February 1912.

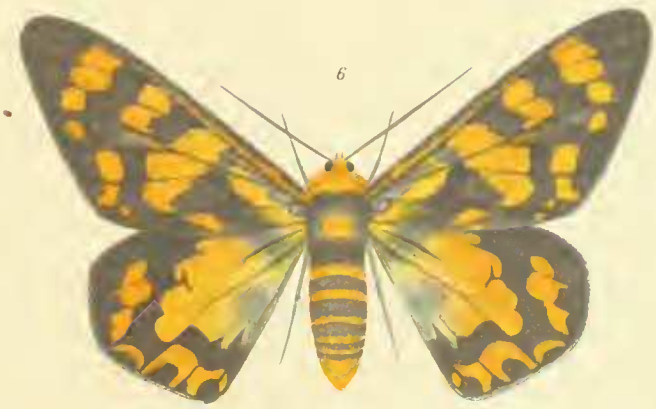
Chlorodontopera discospilata Moore, ♂

Archaeobalbis farinosa Warren, ♂



Dysphania militaris Linné, ♂

Rhuma subaurata Walker, ♂



Dysphania numana Cramer, ♀

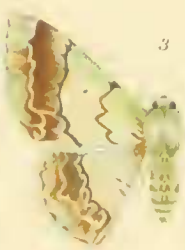
Omphacodes vivida Warren, ♂

Eolochroma turneri Lucas, ♂

Eolochroma suffusa Warren, ♂

Eolochroma suffusa Warren, ♂

Pingasa vaginaria Guenée, ♂



Pingasa angulifera Warren, ♀

Pindica subrosea Warren, ♂

Archaeobalbis viridaria Moore, ♂

FAM. GEOMETRIDÆ

SUBFAM. HEMITHEINÆ

Chlorocrithra tea Butler, ♂

Cusuma flavifusa Hamps., ♂

Iqaffina pisina Butler ♂

Ornithospila avicularia Guenée ♂

Xenopepla bicuneata Prout, ♂

Agoschema gemmata Warren ♂

Argyrocosma argosticta Turner ♂

Rachrospila latata Dognin ♂

Oenochlora imperialis Warren ♂

Anisozyga pteroides Walker ♂

Dioscore melanomma Warren ♂

Rhodochlora albipuncta Warren ♂

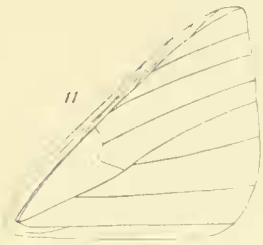
Lophomachia picturata Hamps. ♂

Anisozyga pteroides Walker ♀

Paroumpharodes rubrimargo Warren ♀

Spaniocentra pannosa Moore ♀

Euchloris smaragdaria Fabr. ♀



Thalassodes aucta Prout, ♂

Ausozyga pteroides Walker, ♂

Victoria gordoni Prout, ♀

Maxates cachutaria Walker ♂

Uliocnemis partita Walker, ♀

Agathiopsis basipuncta Warren, ♂

Culpinia diffusa Walker, ♂

Hydata povera Schaus, ♀

Chloromanta verruguata Warren, ♂

Racheospila psittacina Prout, ♂

Paramphiacodes rubrimargo Warren, ♂

Prasinocyma bifimbriata Prout, ♀

Racheospila (Blechroma) rufipicta Prout, ♂

Comibaena albicatena Warren, ♂

Chrysochloroma megaloptera Lower, ♂

Diplodesma celatavia Walker, ♂

Anaphyllodes invasata Walker, ♂

Melalloehlora (Chrysomphe) vernsta Warren ♂

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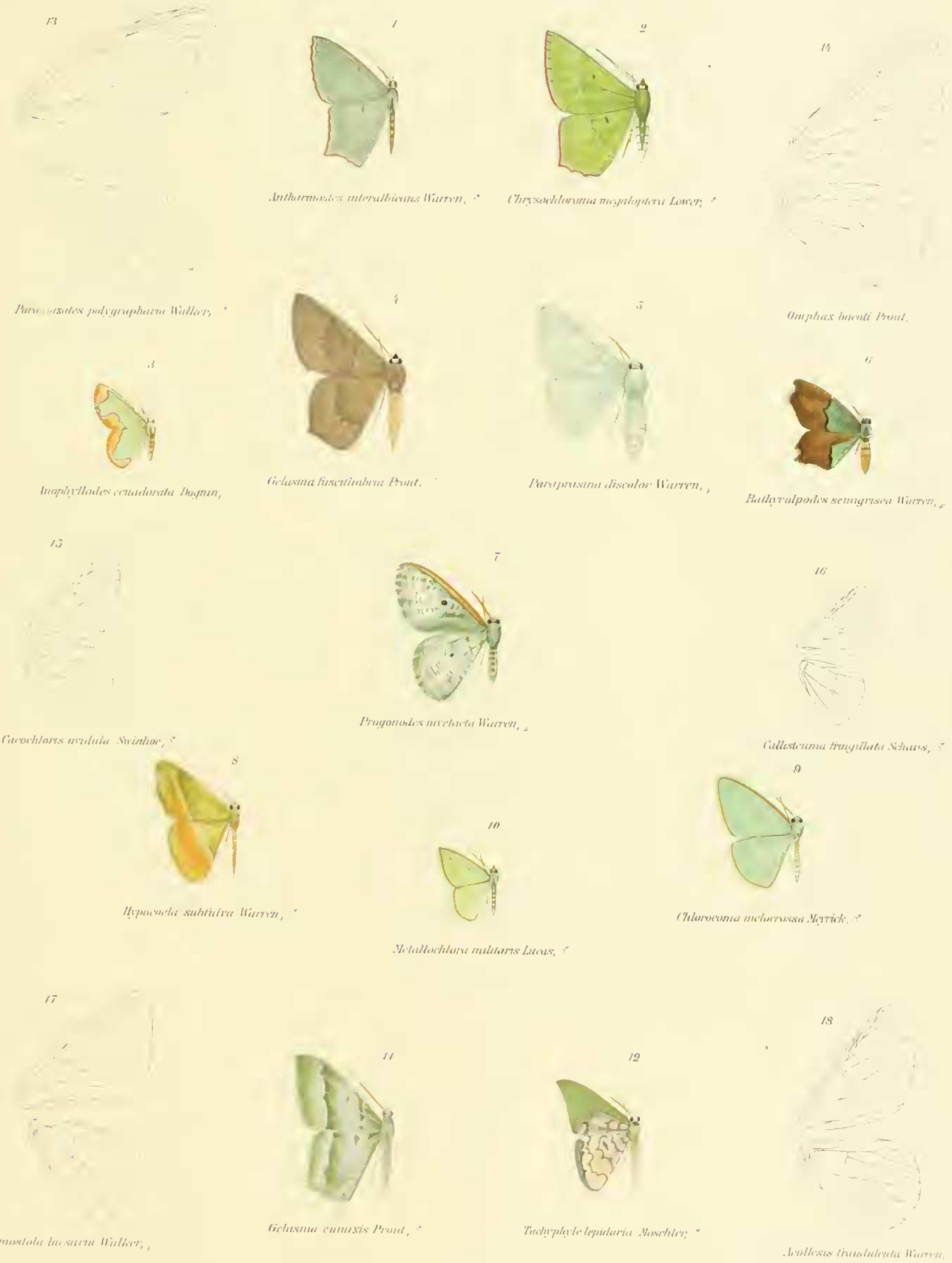
SUBFAM. HEMITHEINÆ



Anthatmoides interalbicans Warren, ♂

Chrysochlorosma megaloptera Lower, ♂

Parasyngrapha polygrapharia Walker, ♂

Omphax bucoli Prout.

Isophyllodes cruadorata Dognin,

Gelasma fuscifimbria Prout, ♂

Parapristma discolor Warren, ♀

Bathycolpodes semigrisea Warren, ♂

Cacochloris viridula Swinhoe, ♂

Progonodes navicula Warren, ♀

Callisteuma fragillata Schaus, ♂

Hypocoela subfulva Warren, ♂

Metallochlora militaris Lucas, ♂

Chlorocoma melocrossa Meyrick, ♂

Comostola laesaria Walker, ♀

Gelasma cumaxis Prout, ♂

Tachyphyle lepidaria Moschler, ♂

Acolloesis fraudulenta Warren, ♂

FAM. GEOMETRIDÆ

SUBFAM. HEMITHEINÆ

Hindleg of Œnospila flavifusata Walker, ♂

Xanthodura trucidata Butler, ♂

Callisteuma fragillata Swinhoe, ♂

Chlorosterrha (?) semialba Swinhoe, ♂

Head of Omphax bacoti, Prout, ♂

Metallochlora (Cosmogonia) decorata Warr, ♂

Prohydata projiciens Prout, ♂

Lasiochlora bicolor Th. Mieg, ♂

Hierochthonia (?) alexandraria Prout, ♀

Lateral view of Anisozyga pieroides Walker, ♀

Archichlora viridimacula Warren, ♀

Lateral view of Dindica para Swinhoe, ♂

Section of antenna of Osteosema sanguilineata Moore, ♀

Section of antenna of Mixocera elongata Warren, ♂

Euloxia meandraria Guenée, ♂

Collesis mimica Warren, ♀

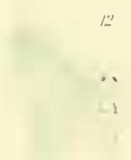
Foreleg of Tachychlora lepidaria Moschler, ♂

Hindleg of Eremiopus marginaria Guenée, ♂

Hemistola semialbida Prout, ♀

Head of Xenopepla bicuneata Prout, ♂

Head of Aporandria specularia Guenée, ♂



Halosterpna pruinosata Staud., ♂

FAM. GEOMETRIDÆ

SUBFAM. HEMITHEINÆ